ITP Rangahau and Research Symposium

BOOK OF ABSTRACTS

OPSITARA

Otago Polytechnic
Southern Institute of Technology
Ara Institute of Canterbury

Otago Polytechnic
Ōtepoti | Dunedin, Aotearoa | New Zealand
4 - 5 December 2025

Acknowledgements

Conference organisers
Scott Klenner, Director: Rakahau, Research and Postgraduate Studies;
Research and Postgraduate Studies team

Contact email: research@op.ac.nz

Thank you to:
Anonymous peer reviewers

Campus Services team

Eden Café

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IT Service Desk team

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Kaitohutohu office team

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Session chairs

Te Pā Tauira team

And all the researchers and contributors for sharing your work with a wider audience.

Cover image
'Nga Kete' Bronze Sculpture, Michel Tuffery, 2018.
Photo: © Otago Polytechnic.

Nāu te rourou, nāku te rourou, ka ora ai te iwi - With your basket and mine, the people will flourish.

Outside Ōtākou | The Hub, the sculpture 'Ngā Kete' by alumnus Michel Tuffery represents the basket of knowledge and reminds us that we build on wisdom from the past and grow from sharing our knowledge with others.

Foreword

It is my pleasure to introduce the *OPSITARA 2025 Book of Abstracts*. Held on the 4th and 5th of December 2025, OPSITARA once again demonstrated the strength of our shared research culture and the power of collaboration across institutions, disciplines, and communities. This year, OPSITARA brought together researchers from across Aotearoa, with strong representation from Ara Institute of Canterbury and Otago Polytechnic, alongside contributions from SIT, EIT, Toi Ohomai, NMIT, and colleagues from the wider polytechnic sector. With almost one hundred presentations, OPSITARA showcased research spanning health, education, the built environment, digital innovation, sport and exercise science, creative practice, mātauranga Māori, and business. The breadth of inquiry demonstrated in this collection of abstracts highlights both the unique identity of the polytechnic sector and its commitment to impactful and community-anchored research.

We were fortunate to host two keynote speakers whose insights framed the symposium's themes. **Dr Lisa Maurice-Takerei** explored the impacts of reform, marketisation, and shifting ideologies on the VET sector in her address *Rising from Reform: Polytechnics and Recovery in Disquieting Times*. She reminded us of the importance of educator voice, public purpose, and the ongoing need to protect the transformative mission of vocational education.

Dr Gianna Leoni (Ngāi Takoto, Ngāti Kuri, Te Aupōuri) addressed the opportunities and risks surrounding AI in *Kaitiakitanga: Protecting Mana Motuhake in the Age of AI*. Drawing on her work at Te Hiku Media, she highlighted the importance of Indigenous data sovereignty, ethical AI development, and the protection of te reo Māori at a time of significant technological and political change.

The research presented at OPSITARA 2025 reflects the sector's creativity, applied focus, and deep commitment to serving learners, industries, and communities. Research of this kind enriches our teaching, strengthens our institutions, and supports learners, employers, and communities to thrive.

My sincere thanks go to all presenters, contributors, reviewers, and attendees who made OPSITARA 2025 an energising and memorable gathering. Your creativity, curiosity, and dedication are what make this symposium such a meaningful annual event. I also extend warm appreciation to the organising team whose efforts ensured a welcoming and engaging experience for all. I invite you to explore this collection with curiosity and optimism for the future of our shared research endeavour.

Scott Klenner, Conference Chair, OPSITARA 2025

Rere Āio

Rere Āio translates to "Journey in Peace," reflecting themes of peaceful movement and the flow of tranquil ideas.

This kōhatu serves as the mauri taonga that represents the collaborative efforts among Ara Institute of Canterbury, Otago Polytechnic, and Southern Institute of Technology within OPSITARA. Rere Āio accompanies OPSITARA at events, meetings, and ceremonial occasions, where it is respectfully handled through karakia and waiata.

Rere Āio was passed from Ara Institute of Canterbury who hosted OPSITARA 2024, to Otago Polytechnic, at our mihi whakatau on 4 December 2025.

Rere Āio will pass next to Southern Institute of Technology for the 2026 conference.

OPSITARA Research Symposium - Programme

Schedule Overview

Day One - Thursday 4 December		
Time	**Activity**	**Venue**
8.15 am	Registration	Hub Atrium & Student Village
9.00 am	Mihi whakatau, kōhatu mauri Dr Megan Potiki, Shaun Tahau (OP), Stanley Tawa (Ara)	Hub Atrium
9.30 am	Kai	Hub Atrium
10.00 am	Keynote Dr Lisa Maurice-Takerei, Associate Dean Academic, Faculty of Culture and Society, Auckland University of Technology *Rising from reform. Polytechnics and recovery in disquieting times*	G 106
10.45 am	Session One, 7 streams	Various rooms, see programme
12.30 pm	Lunch	Manaaki, Harbour Terrace
1.30 pm	Session Two, 7 streams	Various rooms, see programme
3.10 pm	Afternoon tea	Hub Atrium
3.30 pm	Session Three, 7 streams	Various rooms, see programme
5.00 pm	Publications launch (cash bar, snacks, networking)	Manaaki, Harbour Terrace
Day Two - Friday 5 December		
Time	**Activity**	**Venue**
8.30 am	Session Four, 6 streams	Various rooms, see programme
10.10 am	Morning tea	Hub Atrium
10.30 am	Poster presentations	Hub Atrium
11.00 am	Keynote Dr Gianna Leoni, Senior Adviser, Te Hiku Media *Kaitiakitanga: Protecting Mana Motuhake in the Age of AI*	G 106
11.45 am	Prizegiving - Best presentations	G 106
12.00 pm	Farewells and close	G 106

POSTERS

Posters will be on display in the **Hub Atrium** for the duration of the Conference.

Presenters for posters will be available to speak to their presentation in the Hub Atrium on Day Two (Friday) at 10.30 am.

Poster 1	**Poster 2**	**Poster 3**	**Poster 4**	**Poster 5**	**Poster 6**
Health	**Health**	**Health**	**Health**	**Education**	**Health**
Paper ID: E6 Non-specific chronic low back pain: What does osteopathy do? Preliminary findings Anne-Lise Girardin (Ara)	Paper ID: E7 Lecturers' perspectives on AI in nursing education: A proposed collaborative auto-ethnography Avril Guihen; Amy Curry, Matt Cookson (Ara)	Paper ID: E8 A scoping review for clinical reasoning and differential diagnosis of abdominal pain attributed to musculoskeletal dysfunction in primary health care Warwick Shillito. Presented by Peter Olsen (Ara)	Paper ID: 106 The potentiating effects of different warm-up protocols on sprint cycling performance Tyson Huia (Ara); Hennie Pienaar (SIT), Peter Olsen (Ara), Phil Handcock (OP)	Paper ID: 140 What makes a wellness and relaxation massage experience effective? Victoria Morgan; Donna Smith, Jo Smith (SIT)	Paper ID: 211 An analysis of the fatty acid composition of ruminant milk cheeses in Aotearoa Mary Fitzpatrick (Ara)

❶ DAY ONE - Thursday SESSION ONE 10.45 am - 12.25 pm

#	Health Education	Education	Health	Engineering/Digital Technologies	Built Environment	Mātauranga Māori	Creative
	Session Chair: Yvonne Thomas	**Session Chair: Allen Hill**	**Session Chair: Jean Ross**	**Session Chair: Hana Cadzow**	**Session Chair: Tobias Danielmeier**	**Session Chairs: Nikita Rewha & Hayley Walmsley**	**Session Chair: Megan Kitching**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: H 225**	**Venue: H 601**
1	Paper ID: 89 The use of Patient-Reported Outcome Measures (PROMs) in clinical education Zoe Steele (Ara)	Paper ID: 13 Disconnected or empowered? Understanding online learner journeys in an AI-driven world Hemal Amarasekara; Sanjeev Acharya, Jerrylynn Manuel (SIT)	Paper ID: 47 NICU Dads Suzanne Hodgson; Rebecca O'Callaghan, Gabriela Bantas, John Withington, Kate Pearson (Ara)	Paper ID: 2 A replicate-and-extend model for interdisciplinary learning: Critical reflections on the redesign of an industry project for engineering graduates entering construction management Sundeep Daggubati (Ara)	Paper ID: 44 Embedding Te Ao Māori into architectural competency: A transformative shift in registration standards in Aotearoa Bernadette Muir (Ara)	Paper ID: 24 Rongo ā Puku, puku (gut) as a source of intelligence to inform wellbeing Sally Rye (EIT)	Paper ID: 45 Identity and the vernacular image John Osborne (Ara)
2	Paper ID: 176 AI-assisted gamification in nursing education: An autoethnographic exploration of escape rooms and board games in pharmacology teaching Sara Vermeulen (Ara)	Paper ID: 9 Weaving threads: Mapping practitioner theses to understand professional becoming and aesthetic disruption Samuel Mann & Ruth Myers (OP)	Paper ID: E11 The use of Generative Artificial Intelligence (GenAI) to support learning in undergraduate nursing education: Scoping review Janice Groube; Alex McAllum, Jennifer Share, (Ara)	Paper ID: 92 How aeronautical engineering tutors manage their emotions at work, accommodate changes, recognise potential burn-out, and consider their wellbeing as well as that of the organisation Judith McFarland-Hill (OP)	Paper ID: 79 Housing sustainability, performance and affordability Chris Fersterer (OP)	Paper ID: 145 Matihiko Minds: Mentoring indigenous youth to think one step ahead of AI Noor Alani; Sally Rye, (EIT); Charlizza Matehe, Sarah Pihema, & Paul Watson (Toi Matarua)	Paper ID: 66 Photographing an absence - Witnessing the disappearance of Hoiho Astrid Erasmuson (OP)

#	Health Education	Education	Health	Engineering/Digital Technologies	Built Environment	Mātauranga Māori	Creative
	Session Chair: Yvonne Thomas	**Session Chair: Allen Hill**	**Session Chair: Jean Ross**	**Session Chair: Hana Cadzow**	**Session Chair: Tobias Danielmeier**	**Session Chairs: Nikita Rewha & Hayley Walmsley**	**Session Chair: Megan Kitching**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: H 225**	**Venue: H 601**
3	Paper ID: 120 Ākonga perspectives of the value and challenges of oral assessment Alexa Andrew; Rachel Sayers, Kristy Richards (OP)	Paper ID: 70 Industry-aligned programming education: Informing a shared curriculum for ITPs Matt Hamilton (NMIT); Daniel Dang (EIT), Grayson Orr (OP)	Paper ID: 126 Evidence of Leptospira spp. in dogs in the Kingdom of Tonga Kristina Naden (OP); Kate Harder (Unitec), Carolynne Joone (James Cook University)	Paper ID: 235 Vine pruning - when tuakana-teina might not be enough. An application of hDAS for immersive 3D technology to develop vine pruning skills Todd Cochrane (NMIT); Stewart Field, Sai Krishna Srinivasan, Nelly Asmatullayeva, Paul Devine (NMIT)	Paper ID: 124 Digital heritage: From decay to data Sarah McCallum & Blair Isbister (OP)	Paper ID: 19 Mai i te kuinga – Reifying Māori success at the source Tepora Emery & Shirley Lyford (Toi Ohomai)	Paper ID: E18 Identity dump. How does my photography draw attention to the self-expression of identity, through documentation of graffiti? Deborah Marshall (Ara)
4	Paper ID: E5 Enhancing clinical reasoning and patient-centered care: The role of concept mapping in nursing education and practice Julie Bowen-Withington; Sara Vermeulen, Katie Wilkinson, Ruth Sutton (Ara)	Paper ID: 122 MPP research project: Breathing life into online learning and creating a collaborative cohort online Sarah Hexamer (OP)		Paper ID: 74 Industrial automation of small electronic component handling using collaborative robot Nay Lin Oo; Ian Chesterton, Leon Chen (Ara)	Paper ID: 179 Gamified BIM education Leana Scheffer (OP)	Paper ID: E17 Reclaiming moko kauae as a symbol of Indigenous resistance and resilience Kelli Te Maihāroa (OP)	Paper ID: E24 Crafting the sonic experience: Audio roles within Adele's live sound design Charlie Rodgers (SIT)

Lunch 12.30 – 1.25 pm Manaaki, Harbour Terrace

❷ DAY ONE - Thursday SESSION TWO 1.30 pm - 3.10 pm

#	Health Education	Education	Health/Sports Science	Engineering/Digital Technologies	Built Environment	Business	Creative
	Session Chair: Jo Drysdall	**Session Chair: Scott Klenner**	**Session Chair: Sherie Bell**	**Session Chair: Adam Liberatore**	**Session Chair: Leana Scheffer**	**Session Chair: Adrienne Buckingham**	**Session Chair: Caroline Terpstra**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: F 209**	**Venue: H 601**
1	Paper ID: 217 Failing to feedback – In the first instance: Development of an escalation pathway for aged care mentors supporting Bachelor of Nursing students Stacey Porter (SIT)	Paper ID: 8 Equity for success Kerstin Dofs (Ara)	Paper ID: 58 The effect of different swim cap shapes and surfaces on drag Helen Marshall; Lindsey Alton, Nay Lin Oo, Graeme Harris, Peter Olsen (Ara), Michael Hamlin (Lincoln University)	Paper ID: 26 A LuluScope Yao Li, Thomas Cronje, Caillyn Benbow (Ara) Presented by Yao Li	Paper ID: 199 Embedding Lean thinking in quantity surveying education through assessment for learning approaches in New Zealand tertiary institutions Nilmini Thilakarathna (Ara)	Paper ID: 6 Examination of the job satisfaction of customer service employees: A case study of Auckland Airport Olufemi Omisakin (OPAIC)	Paper ID: 215 Icehook **Creative Practice Presentation** Chris Popham (SIT)
2	Paper ID: E3 Strengthening Tiriti o Waitangi and Māori health nursing in Aotearoa Maryann Wilson (Ara)	Paper ID: 158 Creatively delivering HyFlex: A case study from Southern Institute of Technology, Aotearoa New Zealand Traci Meek-Reid; Rachel Mann, Doug Heath (SIT)	Paper ID: 73 Numerical analysis on the performance of different swim cap shapes Nay Lin Oo; Peter Olsen, Helen Marshall, Graeme Harris, Lindsey Alton (Ara), Michael Hamlin (Lincoln University)	Paper ID: E15 What is the value of embedding ethics in electrical trades in Aotearoa David Bettis (OP)	Paper ID: 202 Energy renovation of historic buildings in New Zealand Rachel Paschoalin (Ara)	Paper ID: 63 Workplace Chat 2.0 Rachel Byars; Helen Geytenbeek, Rachel van Gorp, Caryn Hayes (OP)	Paper ID: 220 Whakawhanaungatanga in practice: Tools and approaches for collaborative learning in design Taryn Ormsby; Denise Narciso, Jon Wilson (OP) Presented by Taryn Ormsby

#	Health Education	Education	Health/Sports Science	Engineering/Digital Technologies	Built Environment	Business	Creative
	Session Chair: Jo Drysdall	**Session Chair: Scott Klenner**	**Session Chair: Sherie Bell**	**Session Chair: Adam Liberatore**	**Session Chair: Leana Scheffer**	**Session Chair: Adrienne Buckingham**	**Session Chair: Caroline Terpstra**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: F 209**	**Venue: H 601**
3	Paper ID: E2 Voices of undergraduate nursing students living with disability: A research proposal presentation Gayle Rose & Shimoné Breedt (Ara)	Paper ID: 134 Gathering at the edge of chaos: Rethinking rigour through creative restorying Samuel Mann (OP); Ruth Myers, Dave Guruge, Martin Andrew, Alexa Forbes, Glenys Forsyth, Steve Henry, Rachel McNamara, Carleen Mitchell (OP)	Paper ID: 206 Cricket fast bowling technique risk factors for lumbar bone stress injuries Darryl Hands (Ara); Tyler Coventry-Seale (University of Newcastle)	Paper ID: 127 Numerical simulation of sidecar aerodynamics for high-speed racing Graeme Harris; Nay Lin Oo, Shuangjian Wei (Ara)	Paper ID: 225 Enhancing Green Star in New Zealand: A comparative analysis of global rating systems and improvement in sustainability perspective Yanxi Long & Srividya Krishnamoorthy (OPAIC)	Paper ID: 195 Developing a corporate governance index for publicly listed companies in New Zealand Mark Wilson & Michelle Liu (NMIT)	Paper ID: 88 Holding the centre: Artist-led infrastructure, curatorial practice, and indigenous modes of making space Hayley Walmsley (Provocation Station) & Nikita Rewha (OP)
4	Paper ID: E9 Beyond the syllabus: Delivering Ara Bachelor of Nursing programme in a cross-cultural context Rose Fitzgerald-Carter; Deena Boyd (Ara)	Paper ID: E20 RAG AI co-facilitation in postgraduate study: A position paper Henk Roodt (OP)		Paper ID: 75 Aero-acoustic study of 3-bladed offset multi-rotor propeller Nay Lin Oo; Graeme Harris, Lindsey Alton (Ara)	Paper ID: 236 Evaluating the feasibility of exterior cladding materials in New Zealand luxury homes: Balancing market demand and supply Srividya Krishnamoorthy; Yongjian Li, Sabrina Arklie (OPAIC)	Paper ID: 187 Cultivating seaweed in an aquaculture farm: The value of staff-student publications Anna Palliser & Georgia Wilson (SIT)	

Afternoon tea 3.10 - 3.30 pm Hub Atrium

❸ DAY ONE - Thursday SESSION THREE 3.30 pm - 4.55 pm

#	Education 1	Education 2	Health	Engineering/Digital Technologies	Built Environment	Business	Creative
	Session Chair: Samuel Mann	**Session Chair: Amy Benians**	**Session Chair: Jean Ross**	**Session Chair: David Rozado**	**Session Chair: Jo Drysdall**	**Chair: Indra Kularatne**	**Session Chair: Liz Ditzel**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: F 209**	**Venue: H 601**
1	Paper ID: 162 Blind but fair? Exploring the psychology and practice of anonymous grading Lindsey Alton & Ian Chesterman (Ara)	Paper ID: 131 "How am I here? Why am I here?": The power of transformational learning in practice doctorates Martin Andrew (OP)	Paper ID: E4 New Zealand and Australian nurses family engagement: Capturing family nursing practice across nursing care Anna Richardson (Ara); Dr Sandra Richardson, Health NZ	Paper ID: E26 Auckland mass evacuation: Analysis of traffic demand management strategies Mujaddad Afzal (SIT)	Paper ID: 246 Utilisation of drone technology in construction monitoring and surveying: Case studies from New Zealand projects Hong Liu & Priyanka Raina (OPAIC)	Paper ID: 135 Community of Practice Meeting **BUSINESS**	Paper ID: 261 Social fabric creation in collective creative research Nicol Sanders-O'Shea (Toi Ohomai)
2	Paper ID: 149 Emotional intelligence embraces imposter phenomenon Sherie Bell & Judith McFarland-Hill (OP)	Paper ID: E23 Designing for sustainability education and challenging climate fatigue Machiko Niimi (OP)	Paper ID: 155 Please see my family: How do LGBTIQ+ parents navigate and resist (het-cis-bio-) normativities within family-related services in Aotearoa New Zealand? Suzanne Miller (OP) Presented by Scout Barbour-Evans	Paper ID: E25 Design assessments for construction courses using AI Rehan Masood (OP)	Paper ID: 121 Sparking enquiry: Fostering human-centred critical thinking strategies Leana Scheffer & col Fay (OP)	Indra Kularatne (OPAIC)	Paper ID: 262 SUSS photo essay **Creative Practice Presentation** **(Hub Atrium)** Nicol Sanders-O'Shea (Toi Ohomai)

#	Education 1	Education 2	Health	Engineering/Digital Technologies	Built Environment	Creative CoP
	Session Chair: Samuel Mann	**Session Chair: Amy Benians**	**Session Chair: Jean Ross**	**Session Chair: David Rozado**	**Session Chair: Jo Drysdall**	**Chair: Machiko Niimi**
	Venue: G 303	**Venue: G 310**	**Venue: G 309**	**Venue: G 315**	**Venue: G 204**	**Venue: H 601**
3	Paper ID: 239 Serious games: Initial findings of a design-based study of custom playing cards in materials and engineering foundation papers Jonathan Muhl (SIT)	Paper ID: 156 You wash, I'll dry: An exploration of AI for course building and creative work Traci Meek-Reid (SIT)	Paper ID: 181 Collaborative auto-ethnography, time, and the practice of sustainability Allen Hill; Adam Brasell, Georgie Archibald, Lena Mkwara (Ara), Reimana Tutengaehe (Te Wananga o Aotearoa)	Paper ID: 114 Meeting a need: Inclusive design and real-world solutions Andrew Wallace (OP)	Paper ID: 196 Home design for work from home families in New Zealand Phillip Etherington (Ara)	Paper ID: E22 Community of Practice Meeting **CREATIVE**
4	Paper ID: 226 How good is my study action plan? Systematic application of data science in LLM retrieval augmentation for rewriting and grading early childhood trainee submissions Todd Cochrane (NMIT)	Paper ID: 200 Completing the Bachelor of Applied Science 5-year review: Lessons learned in rewriting the programme document Codi Ramsey & Kath Danaher (OP)	Paper ID: 46 Building a “pracademic” research culture Suzanne Hodgson (Ara)	Paper ID: 133 Beyond the course descriptor: Mapping the DNA of graduate success Lindsey Alton; Ian Chesterman, Mohammad Ramezanian Pour (Ara)	Paper ID: 212 The adoption and impact of digital procurement on the supply chain efficiency in the New Zealand construction industry Jalthotage Nishika Jayasinghe; Rohan Dharmadasa, Priyanka Raina, Indrapriya Kularatne	Machiko Niimi (OP)

Publications Launch 5.00 - 6.30 pm Manaaki, Harbour Terrace

❹ DAY TWO - Friday SESSION FOUR 8.30 am - 10.10 am

#	Education 1	Education 2	Mātauranga Māori	Engineering/Digital Tech / Built Environment	Creative	Creative Practice Presentation
	Session Chair: Danny Fridberg	**Session Chair: Scott Klenner**	**Session Chair: Kelli Te Maiharoa**	**Session Chair: Adrian Tetlow**	**Session Chair: Rachel Dibble**	**n/a**
	Venue: G 303	**Venue: G 310**	**Venue: F 209**	**Venue: G 315**	**Venue: H 601**	**Venue: Hub Atrium**
1	Paper ID: 20 AI in vocational education: Progressing into personalised learning environments Selena Chan (Ara)	Paper ID: 198 Designing and delivering the Master of Applied Science – coursework programme - asynchronously Codi Ramsey; Phil Handcock (OP)	Paper ID: 32 Beyond competition: Why people play Kī-o-Rahi Patrick Boudreau. Presented by Tyson Huia & Helen Marshall (Ara)	Paper ID: E27 Achieving UN-SDGs through prefabricated construction Rehan Masood (OP)	Paper ID: E10 Kickstarting creativity through monoprinting Carol King (Ara)	Paper ID: E21 Language of Wearing **Creative Practice PresentatiOn** **Hub Atrium**
2	Paper ID: 173 Making feedback matter: Exploring student engagement with summative assessment feedback in the Bachelor of Applied Management programme Joe Taylor; Phil Osborne (OP)	Paper ID: 33 Hi, it's me, I'm still the imposter, it's me Sherie Bell (OP)	Paper ID: 252 Narrative as pedagogy: Teaching active listening in nursing education through kuia-informed research Shirley Lyford & Tepora Emery (Toi Ohomai)	Paper ID: 142 Longitudinal study on the perceived importance and interest of the IEA Graduate Attributes in engineering education Hilary Lawrence (OP)	Paper ID: E13 Images that decompose: Rethinking photographic materials in the Anthropocene Wendy Clarke (Ara)	
3	Paper ID: 64 Exploring neurodiverse learners' use of Artificial Intelligence in tertiary education Phil Osborne; Mairead Fountain, Rachel van Gorp (OP)	Paper ID: 177 Weaving Te Tiriti and Te Reo me ngā Tikanga into the Bachelor of Sustainability and Outdoor Education (BSOE). He raranga i Te Tiriti me Te Reo me ngā Tikanga ki te BSOE Lena Mkwara; Rachael Pelvin, Te Ao Marama Apiata, Allen Hill (Ara)		Paper ID: 169 Different South Island institutes in NZ comparing of engineering student perceptions of graduate attributes Adam Liberatore (OP)	Paper ID: 85 Ākonga expectations activities **Education Creative Practice Presentation** Gary Barclay (OP)	Margo Barton; Martin Kean, Annette Cadogan, Pip Beaton (OP)

Morning tea	10.10 - 10.30 am	Hub Atrium

Poster presentations	10.30 - 11.00 am	Hub Atrium

Posters will be on display in the **Hub Atrium** for the duration of the Conference.

Presenters for posters will be available to speak to their presentation in the Hub Atrium on Day Two (Friday) at 10.30 am.

Poster 1	**Poster 2**	**Poster 3**	**Poster 4**	**Poster 5**	**Poster 6**
Health	**Health**	**Health**	**Health**	**Education**	**Health**
Paper ID: E6 Non-specific chronic low back pain: What does osteopathy do? Preliminary findings	Paper ID: E7 Lecturers' perspectives on AI in nursing education: A proposed collaborative auto-ethnography	Paper ID: E8 A scoping review for clinical reasoning and differential diagnosis of abdominal pain attributed to musculoskeletal dysfunction in primary health care	Paper ID: 106 The potentiating effects of different warm-up protocols on sprint cycling performance	Paper ID: 140 What makes a wellness and relaxation massage experience effective?	Paper ID: 211 An analysis of the fatty acid composition of ruminant milk cheeses in Aotearoa
Anne-Lise Girardin (Ara)	Avril Guihen (Ara)	Warwick Shillito. Presented by Peter Olsen (Ara)	Tyson Huia (Ara); Hennie Pienaar (SIT), Peter Olsen (Ara), Phil Handcock (OP)	Victoria Morgan; Donna Smith, Jo Smith (SIT)	Mary Fitzpatrick (Ara)

Keynote Speech - Day One

Rising from reform. Polytechnics and recovery in disquieting times

This keynote briefly examines the ideological shifts, sweeping reforms, and increasing marketisation of education. There is discussion about the wider educational enterprise but with a particular focus on the role and identity of polytechnics in a rapidly reconfigured and developing landscape. The address tracks some current and historical highs and lows and points to the erosion of educator voice, the rise of private interests, and the narrowing of education's purpose to one of economic utility.

While the outlook is unclear, we take a moment for reorientation and reclamation supported by the theorising of VET as an opportunity for human flourishing—challenging the almost unquestioned economic narrative.

The speech considers polytechnic identity and the idea that, as we relocate ourselves in a reorganised VET environment, we continue to hold close our educational and transformative mission as educators, leaders, researchers, and all those involved in the public VET enterprise.

Author

Dr Lisa Maurice-Takerei
Associate Dean Academic,
Faculty of Culture and Society
Auckland University of Technology

Dr Lisa Maurice-Takerei is a VET researcher with a special interest in the work and identity of VET educators. Recent work includes discussion on the complexities of VET in Aotearoa over time. The main premise of Lisa's work is the recognition of teaching as an opportunity for agency and creativity, and the responsibility of educators to be part of creating a more equitable society.

Keynote Speech - Day Two

Kaitiakitanga: Protecting Mana Motuhake in the Age of AI

Gianna will discuss her work in language revitalisation and the ways we can ensure AI is ethically and culturally appropriate for indigenous language and culture at a time when the role of Te Tiriti faces challenges from government direction.

Author

Dr Gianna Leoni (Ngāi Takoto, Ngāti Kuri, Te Aupōuri)
Senior Advisor at Te Hiku Media

Te Hiku Media, also known as Te Reo Irirangi o Te Hiku o Te Ika, is an iwi radio, media, and technology hub based in Kaitāia, founded in 1991. The not-for-profit, charitable organisation is connected to the five iwi of the Far North: Ngāti Kuri, Te Aupōuri, Ngāi Takoto, Te Rarawa, and Ngāti Kahu. The organisation's history determines its continued purpose to contribute to the revitalisation of te reo me ōna tikanga. In particular, advocating for ethical and culturally appropriate use and creation of Artificial Intelligence (AI) in relation to Indigenous language and culture.

Paper ID: 2

A replicate-and-extend model for interdisciplinary learning: Critical reflections on the redesign of an industry project for engineering graduates entering construction management

Sundeep Daggubati (Ara Institute of Canterbury)*

Built-environment programmes increasingly attract learners transitioning from civil and structural engineering into construction management and quantity surveying (CM/QS). While these students bring strong technical foundations, they often encounter a disciplinary shift toward cost analysis, procurement, constructability, and reflective professional practice. This presentation is a critical reflection on the redesign of an industry project assessment to support that transition through an interdisciplinary "replicate-and-extend" model.

The redesigned assessment required students to replicate elements of an existing engineering project such as sustainable concrete mixes or materials performance testing using familiar laboratory and analytical procedures. From this foundation, students extended the work through CM/QS perspectives, applying methodologies in cost estimation, procurement strategy, constructability evaluation, risk analysis, and sustainability appraisal. Assessment outputs included a group presentation and an industry-style report, both aligned with authentic professional communication practices.

The assessment approach draws on principles of constructive alignment, transition pedagogy, and boundary-crossing theory by linking students' prior discipline with the capabilities required in CM/QS roles. Embedding theoretical integration and reflective analysis across the assessment structure supported the development of teamwork, application of knowledge, and critical evaluation of industry-relevant decisions. The model demonstrates how programme design can intentionally bridge disciplinary worlds, providing learners with a scaffolded pathway into construction-focused professional identities.

The redesign offers a transferable framework for built-environment educators seeking to strengthen interdisciplinary coherence, enhance authenticity of assessment, and better recognise the disciplinary starting points of engineering-trained learners. Ethics: This abstract critically reflects on assessment and curriculum design only. No evaluative or research data were used.

Author

Sundeep Daggubati is a Senior Academic and Programme Leader for the Graduate Diploma in Construction qualification at Ara. His industry experience spans estimation, quantity surveying, damage assessments, detailed engineering evaluations, and construction project management. He is a Chartered Construction Manager and holds qualifications in Civil Engineering, Business, and Tertiary Education. He is interested in construction management education and modern methods of construction.

Paper ID: 6

Examination of the job satisfaction of customer service employees: A case study of Auckland Airport

Olufemi Muibi Omisakin (Otago Polytechnic Auckland International Campus)*

Airports are integral to the aviation industry as they provide aircraft runway facilities, handling services, and cargo management. The performance of an organisation depends on its employees. Job satisfaction plays a significant role in employees' performance and commitment. The extent to which employees meet and satisfy customers' expectations depends on the satisfaction they derive from their job.

This study examined the impact of hygiene factors and motivators on the job satisfaction of customer service employees at Auckland Airport. The study adopted a descriptive quantitative approach; a 5-point Likert scale (ranging from "agree" to "disagree") was used to collect data from 126 participants. The questionnaire consisted of two sections: Section 1 was designed to collect demographic data, while Section 2 focused on examining job satisfaction. Data collection commenced after the OPAIC Ethics Committee's approval (AIC-RE-2024-20). Questionnaires were distributed to customer service employees at Auckland Airport. Descriptive analysis was used to analyse the data collected; this enabled the research to summarise and condense the dataset into a manageable form.

The analysis focused on five factors: work environment, job benefits, professional development, interpersonal relationships, and recognition, examining how each factor influences the job satisfaction of customer service employees at Auckland Airport. The findings indicated the following:

The first factor consisted of seven items, six of which recorded means between 3.54 and 4.54. Only one item had a mean of 2.20. This section recorded an average mean (AM) of 3.93. The second factor had seven items; six recorded mean values between 3.52 and 4.01, while one item had a mean of 2.73. The AM for this factor was 3.69. Six items were created for factor three, each recorded means between 3.26 and 4.56, with an AM of 3.55. Factor four consisted of five items, with each item recording means between 3.60 and 3.90, yielding an AM of 3.74. The final factor included nine items; eight had means between 3.45 and 4.61, while one recorded a mean of 2.58. Overall, factor five had an AM of 3.98.

Based on the AM analysis, four factors had a significant influence on job satisfaction. Recognition (AM = 3.98) was found to be the strongest influencer of job satisfaction among customer service employees at Auckland Airport. Work environment (AM = 3.93) also significantly influenced employee job satisfaction. Job benefits (AM = 3.69) and interpersonal relationships (AM = 3.74) exhibited moderately positive influence, whereas professional development (AM = 3.55) emerged as the weakest factor influencing job satisfaction.

The implication of this study is that job benefits and professional development did not have a significant influence on the job satisfaction of customer service employees at Auckland Airport.

Keywords: job satisfaction, work environment, job benefits, interpersonal relationships, professional development

Author

Dr Olufemi Muibi Omisakin is a principal lecturer, a senior researcher, and coordinator of the Professional Project and Placement Master's Thesis at Otago Polytechnic Auckland International Campus. He obtained his PhD in social sciences and public policy from Auckland University of Technology. His doctoral research was on immigrants' entrepreneurship management. He teaches postgraduate applied management and business, and supervises master's students.

Paper ID: 8

Equity for success

Kerstin Dofs (Ara Institute of Canterbury)*

This presentation will describe a research project that aimed to close the discrepancy between the actual level of English of English as an Additional Language (EAL) learners and the level needed to achieve in regular programmes at higher educational institutions (HEI). This ethnographic research project collected qualitative data from observations of, and reflections on, the Personalised English Language Enhancement (PELE) course at University of New South Wales (UNSW) in Sydney. Then a similar course, the Ara Personalised Language Upskilling and Self-development (Ara PLUS) course, was designed and trialled at Ara Institute of Canterbury. More than sixty students participated in the PELE course, and 10 were interviewed in this study. In the 2023 and 2024 Ara PLUS courses, 20 out of 27 enrolled students were interviewed. In investigating and piloting the course, the following research problem areas were identified to guide the research project:

1. The impact of the Ara PLUS course on the social, linguistic and academic adjustment of EAL students who participated in it.
2. The role of peers in the Ara PLUS course in EAL students' social, language, and academic adjustment.

Data was analysed in relation to the research theme of; the impact of the PELE course and the Ara PLUS course, on the student's social, linguistic, and academic adjustment, using knowledge gained through previous research, and wider literature in this field.
Students' own measurable data show that participation in the Ara PLUS course enhanced their English language proficiency. Other findings were that the students claimed that the course helped develop their cultural understanding, self-confidence, efficacy, and communication skills.

Author
Kerstin is currently working at Ara Institute of Canterbury, Christchurch, New Zealand. She has a PhD through Macquarie University in Sydney. Her research interests are around adjustment and autonomy, and how these presently are dealt with, by English as an Additional Language (EAL) students and teachers, in programmes at higher educational institutions.

Paper ID: 9

Weaving threads: Mapping practitioner theses to understand professional becoming and aesthetic disruption

Samuel Mann (Otago Polytechnic)*; Ruth Myers (Otago Polytechnic)*

This study develops a novel framework for understanding professional practice research through the analysis of completed doctoral theses.

Prompted by a need to better describe the role of time within the practitioner thesis, the aim was to explore how practitioner-scholars narrate their evolving professional identities, ethical commitments, and research approaches, and how these are reflected in the structures and aesthetics of their theses.

What emerged was a Weaving Threads Framework that captures both the depth of ontological transformation ("practice-as-becoming") and the extent of aesthetic disruption ("form-bending") in practitioner research.

The context for this work lies in the increasing tensions between expectations of conventional formats and epistemologies, and the demands of professional practice research. However, there is limited guidance on how to assess or scaffold such work beyond conventional academic norms. This research addresses this gap by analysing 14 completed theses to identify patterns, tensions, and trajectories.

We used a qualitative, interpretive methodology grounded in reflective reading and thematic mapping. Each thesis was considered across dimensions which we then summarised into emergent interwoven threads—Time, Voice, Place, Form, Framework of Practice, Project Lens, Deeper Reckoning, Storying Practice, Aesthetic Practice, and Audience Orientation—each described with several example descriptions and illustrative quotes. Maturity model language was used to articulate different levels of development across two dimensions: Practice as Becoming (the extent of ontological depth), and aesthetic disruption. This we present as a "Weaving Threads framework."

Findings show that deeply transformative professional journeys often coincide with creative, transgressive thesis forms. Rather than being orthogonal, the dimensions are fundamentally entwined—suggesting that ontological risk-taking is frequently accompanied by aesthetic experimentation. The framework also highlights diverse strategies of voice, temporality, and place-making used by practitioner-researchers.

This research contributes a flexible yet robust evaluative lens for supervisors, examiners, and researchers navigating the expanding genre of professional practice theses. It provides a language for supporting and legitimising diverse knowledge practices, and offers a basis for curriculum design, assessment, and ongoing scholarly dialogue in practice-based research contexts.

Authors
Samuel Mann (Professor, CapableNZ, Otago Polytechnic) is a geographer and computer scientist whose focus is making a positive difference through professional practice. He developed the role of the sustainable practitioner, the Sustainable Lens, and the Transformation Mindset. He led the development of the Doctor of Professional Practice. When not working, he is probably swimming in open water.
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Dr Ruth Myers is a facilitator at Capable NZ and an artist living by a beautiful wild beach on Otago Peninsula in Dunedin. She has research interests in performativity, body, technologies, place, sustainability, care, ethics, play, practice based/led research, professional practice, autoethnography.
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Paper ID: 13

Disconnected or empowered? Understanding online learner journeys in an AI-driven world

Hemal Amarasekara (Southern Institute of Technology)*; Sanjeev Acharya (Southern Institute of Technology); Jerrylynn Manuel (Southern Institute of Technology)

Artificial intelligence (AI) is reshaping the educational landscape. While some predict its greater use to support learning in higher education, others have taken a different stance as a result of the growing concern over the appearance of generative-AI content in ākonga work. In relation to online learning, there have been calls for the revision of several well renowned online course design frameworks (e.g., the Community of Inquiry) to include the potential influence AI has on the learning space. Although much is already known the expectations and experiences online learners in relation to dimensions such as course design, peer-to-peer and learner-tutor interactions, and learning achievement; none have gone so far as to incorporate AI adoption in its scrutiny alongside the key elements of online student success. Failing that, institutions would run the risk of perpetuating course design practices that are not truly reflective of the needs of their learners in this current climate. And so, this study aims to answer the question: What are the expectations and experiences of online students in the era of AI? To address this, perspectives from SIT2LRN students enrolled in Business, Marketing, and Commerce (Level 4–9) programmes over two intakes were sought via online survey. The data will be analysed using descriptive and inferential statistical techniques to identify patterns and relationships between learner characteristics; perceptions of AI; and satisfaction with course design, facilitation, and organisational support. Results will be shared in the presentation revealing key insights into the current state of SIT online education in an AI-driven world, including how much priority students give to AI. The findings will have implications for programme managers, course designers, facilitators, and online learners (i.e., individuals involved in shaping the online learning experience).

Author

Hemal Amarasekara is a tutor and programme operations manager at the Southern Institute of Technology in New Zealand. He has over eleven years of tutoring experience and has worked for several years as a professional marketer in the corporate sector. He supports students as an online facilitator and research supervisor for undergraduate students at SIT2LRN (SIT's distance education faculty). He also teaches both undergraduate and postgraduate students at the School of Business. His areas of expertise include Applied Marketing, Business Operations Marketing, Principles of Marketing, Integrated Marketing Communications, and Digital Marketing. He is passionate about travelling, diving, playing tennis, and doing volunteer work in the community.

Paper ID: 19

Mai i te Kuinga – Reifying Māori success at the source

Tepora Emery (Toi Ohomai Institute of Technology)*; Shirley Lyford (Toi Ohomai Institute of Technology)

Mai i te Kuinga – Reifying Māori Success at the Source (2022–2024) was a collaborative research project led by tauira (students) and kaiako (teachers) at Toi Ohomai Institute of Technology. It explored Māori success through the lived experiences and worldviews of kuia, offering a counter-narrative to conventional academic metrics such as enrolment, completion, and qualification rates.

Four Māori students, as kairangahau teina (emerging researchers), returned to the wellsprings of their own whānau—their kuia—to gather and reflect on pūrākau (stories) of intergenerational flourishing. Guided by narrative inquiry and institutional values, the project affirmed storytelling as a powerful pedagogical tool and a source of culturally grounded indicators of success.

Mai i Te Kuinga tells us that our mātua-tūpuna are the source who harbour and hold pūrākau that weave together the past, present, and future. Such pūrākau are a valuable, often untapped resource that can inform learners' journeys. The kuia in this study, shaped by the socio-economic conditions of the 1930s and 1940s, shared experiences of classroom racism, low expectations, and limited educational pathways. Yet, they defined success not through formal education, but through authenticity, integrity, spiritual awareness, adaptability, and alignment with tikanga and whānau values.

The kuia reminded us that "sometimes one's life is already written by the tūpuna." Success, in this view, is fulfilling the obligation to carry forward the mahi—the gift—handed down through generations. "To carry that gift is an honour and a privilege," they said, "And time teaches us this."

This presentation invites reflection on the role of pūrākau o te whānau in tertiary education and asks:

- What pūrākau do Māori students and their whānau hold, and how might these support their journeys?
- How can teachers support students to seek, interpret, and integrate this wisdom into their learning?

Authors

Tepora Emery (Te Arawa/Tainui) is a kaupapa Māori researcher committed to centring Māori voices, values, and lived experiences in research. Her work spans areas of cultural identity, wellbeing, and whānau resilience and flourishing. Tepora brings a background in community-based research, storytelling, and healing practices grounded in te ao Māori. She is dedicated to research that uplifts, empowers, and serves whānau, hapū, iwi, and hāpori (communities).

Shirley Lyford is an academic staff member in Te Tohu Paetahi Tāpūhi (BN) programme at Toi Ohomai Institute of Technology. She teaches across the Rotorua and Tauranga campuses. Her background is both clinical and nursing education. Her teaching focuses on supporting students to develop safe, competent, and culturally responsive nursing practice. Shirley's particular interest is culturally grounded approaches to teaching and learning. She co-authored Te Hihimā, a bicultural philosophical framework for nursing education that uses the metaphor of a woven cloak to represent the integration of knowledge, protection, and professional identity in nursing. Her work contributes to ongoing efforts to strengthen inclusive and meaningful learning environments for all nursing students.

Paper ID: 20

AI in vocational education: Progressing into personalised learning environments

Selena Chan (Ara Institute of Canterbury)*

This presentation reports on projects at Ara Institute of Canterbury to introduce and integrate Generative Artificial Intelligence (Gen AI). The main objective is to ascertain how Gen AI can be used to support ako. Participative Action Research (PAR) is the overarching research framework. Perspectives of kaiako and ākonga as they trial, utilise and evaluate Gen AI are gathered. Data collection included classroom observations, surveys, focus groups, samples of ākonga work and reflective conversations with kaiako. Thematic analysis identified key findings and processes and guidelines were synthesised using case study process tracing.

Since 2023, capability building towards Gen AI literacies for ākonga and kaiako have been a focus. Much mahi is still to be undertaken but a nucleus of kaiako now lead Gen AI developments within their disciplines. This year, piloting and developing Gen AI custom chatbots/agents/apps have begun. In doing, we move closer to the goal to offering opportunities for kaiako to develop bespoke AI-supported ako for their ākonga.

Two approaches are reported in this presentation. Firstly, capstone projects undertaken by our Bachelor of Information and Computing Information (BICT) ākonga who have developed chatbots to support foundation/bridging (literacy) and trades (numeracy) ākonga. Secondly, a comparative analysis is undertaken of the efficacy of using AI agents (CoPilots, Notebook LM, and Cogniti). The presentation will showcase examples, along with summarised data from across the projects.

Presently, AI can provide individualised/personalised AI-supported learning to each ākonga. AI is deployed to support ako but not to replace the required 'learning by doing.' Ako encompasses more than just the learning of content but is also grounded in whanaungatanga and manaakitanga. The use of Gen AI must also consider issues of equity, ethics, and data sovereignty. In doing so, the integration of AI to support personalised ako can be better understood and advanced.

Author

Selena is an educational/capability developer at Ara Institute of Canterbury. Her work includes facilitating curriculum development, technology-enhanced learning /integration of AI projects, and academic educator development. She has published widely in vocational research journals and recent publications include two monographs and two edited books. She is currently co-editing another book, *Post-Reform of Vocational Education*, for publication in 2026.

Paper ID: 24

Rongo ā Puku: Puku (gut) as a source of intelligence to inform wellbeing

Sally Rye (Eastern Institute of Technology)*

My research investigates the revitalisation of more traditional knowledge, practices, and understandings related to kai (food) in an effort to optimise the health and wellbeing of Māori and Indigenous Peoples.

Method: 'Rongo ā Puku' is the methodological approach designed as part of my doctoral thesis within a kaupapa Māori framework. It conceptualises Puku (gut) as a source of 'intelligence' to inform wellbeing and is an Indigenous approach to hauora Māori. Employing both Māori and western approaches the method includes a comprehensive literature review; the collation of pūrākau (Indigenous stories); individual and collective focus groups; interviews; online surveys; hau kōrero (personal conversations), and an analysis of kōrero tawhito (ancient narratives).

Results/Findings: This research outlines a set of key findings that include evidence of whānau capability to engage in their own wellbeing solutions. This work contributes towards whānau understandings of how we can exercise rangatiratanga through revitalising and applying traditional ways of knowing, being, and doing towards improving the health of our communities. It further offers a culturally integrated Rongo ā Puku Framework and guidelines for use in clinical and community contexts.

Discussion: This research is of particular relevance to Aotearoa at a time when Māori are developing increasing emphasis on self-development strategies and the recognition of solutions informed by Indigenous knowledge. This rangahau argues how 'kai ora and puku ora' (food as medicine and gut health practices) might be normalised as an Indigenous strategy to wellbeing.

Author
Dr Sally Rye (Ngāti Kahungunu, Ngāti Porou, Te Arawa) is Head of Research at Eastern Institute of Technology (EIT) and founder of Rongo ā Puku Consultants. Born in Maraenui, Napier, she specialises in the gut-brain axis, the endocrine system, and Indigenous approaches to wellbeing. Sally uses neuro semantics and pūrākau to support whānau understanding of their tinana, sharing mātauranga and rauemi that empower whānau to be rangatira of their own Hauora.

Paper ID: 26

A LuluScope

Yao Li (Ara Institute of Canterbury)*; Thomas Cronje (Ara Institute of Canterbury); Caillyn Benbow (Ara Institute of Canterbury)

The LULU filter is a reasonably modern digital signal processing tool. This filter operates on digital data, as can be readily converted from a real-world analogue signal, and is characterised as an efficient and effective digital filter particularly for impulse noise; thus it eliminates outliers. It has also been found to be effective for reducing periodic natured noise, e.g. 50 Hz induced power-line noise which is common in biomedical signals due to their very small magnitudes, ranging from microvolts to millivolts. There is no evidence in the literature that a LULU filter has been used for smoothing/filtering of noisy biomedical signals as an implementation.

A group at Ara Institute of Canterbury has been working on implementing the LULU filter as a standalone filter. A microcontroller system has been targeted to realise this. A custom designed and built prototype has been constructed, and results have been collected, and will be presented.

The system comprises two main components:

- The ECG Bee is a standalone microcontroller system designed to generate analogue signals that emulate realistic ECG signals from real patients. This is achieved by reconstructing a quality analogue signal from a stream of digital data. This data is sourced from a publicly available database. The data is embedded into different ECG Bees to represent individual patients. By converting digital data into analogue signals, the ECG Bee effectively simulates biomedical signals, enabling realistic testing without relying on live patient input.
- The LuluScope is another standalone microcontroller system designed to implement the Lulu filtering algorithm. It samples an analogue signal, applies the algorithm in real-time, and sends the digital waveforms to an Android device to display. The LuluScope uses the AOA (Android Open Accessary) protocol to communicate with Android devices such as smart phones or tablets. The AOA implemented in an ARM microcontroller was presented at OPSITARA 2021.

An Android app is also developed to interact with the LuluScope. In the presentation we will report on our progress with this project.

Author

Dr Yao Li is a Principal Academic Staff Member at Ara Institute of Canterbury. With extensive experience in curriculum development and teaching, Yao has delivered a wide range of courses including electronic circuits, electrical principles, microcontrollers, embedded systems, C programming, and Android programming. His current research focuses on microcontrollers and embedded systems, with a particular interest in their practical applications and innovations in education.

Paper ID: 32

Beyond competition: Why people play Kī-o-Rahi

Patrick Boudreau (Ara Institute of Canterbury); Helen Marshall (Ara Institute of Canterbury)*; Tyson Huia (Ara Institute of Canterbury)*; Peter Olsen (Ara Institute of Canterbury); Heperi Harris (Ara Institute of Canterbury)

Aim: This study, guided by kaupapa Māori principles, sought to understand what motivates people to begin and sustain participation in kī-o-Rahi, a traditional Māori sport.

Context: While physical activity is well established as beneficial for physical and mental wellbeing, most existing studies adopt Western paradigms that overlook the relational, spiritual, and collective dimensions central to Indigenous conceptions of health. Kī-o-Rahi, offers a unique context in which these dimensions are embedded in practice.

Methodology: The research process began with a hui (meeting) involving kī-o-Rahi organisers from across Te Waipounamu (South Island, New Zealand), where the study's kaupapa (values) and central question were co-developed: "What motivates participants to start and continue to play kī-o-Rahi?" Participants were recruited during a regional community kī-o-Rahi tournament in Ōtautahi Christchurch. Thirteen players (7 women, 6 men; 7 Māori, 6 New Zealand European/Pākehā) took part in three focus groups conducted during tournament rest breaks.

Results: Analysis revealed three interconnected motivational themes. First, whakawhānaungatanga (making connections) was central: participants valued the rapid formation of whānau-like bonds, multigenerational play, and the sport's inclusive, welcoming culture. Second, pride in te ao Māori emerged strongly, with participants describing feelings of validation, ownership, and cultural connection through engagement in a sport authentically rooted in Māori traditions. Finally, participants appreciated kī-o-Rahi's balance between competition and fun, noting that while competitive spirit was present, the emphasis remained on enjoyment, inclusion, and a safe learning environment.

Significance and implications: Findings indicate that kī-o-Rahi is more than a sport; it is a culturally grounded practice that fosters social cohesion, cultural affirmation, and wellbeing. Supporting Māori-led initiatives to promote kī-o-Rahi may contribute to health equity, cultural revitalisation, and community resilience. Future efforts to grow the popularity of kī-o-Rahi could therefore attempt to promote its ability to enhance not just health but community building and Māori culture.

Authors

Helen Marshall, PhD, is a Senior Lecturer in the Department of Nursing, Midwifery and Allied Health at Ara. She is the coordinator for the Bachelor of Applied Science, specialising in Physical Activity and Health Promotion. Her main teaching areas include anatomy and physiology, research design, lifestyle and health, and health promotion. Helen's research interests include health promotion, nutrition, sport and exercise particularly relating to the prevention and management of chronic disease.

Tyson Huia (Ngāti Maniapoto, Ngāti Whātua, Ngāti Tama, Ngāruahine), MAppSc, is a Lecturer in Sport and Exercise Science. Previously, Tyson was a strength and conditioning coach in Southland, working with athletes across a variety of sports.

Paper ID: 33

Hi, it's me, I'm still the imposter, it's me

Sherie Bell (Otago Polytechnic)*

The purpose of this research is to explore and understand the impact of imposter phenomenon (IP) on kaimahi at Otago Polytechnic. IP is complex and impacts individuals in a variety of ways; kaimahi at OP have described IP as a feeling of intimidation, inexperience, insecurity, and 'intellectual phoniness.' Those impacted by IP fear their capability is going to be questioned; they overwork and overprepare to make up for their perceived shortcomings. By contrast, some who experience the same 'intellectual phoniness' use the feeling as a motivator; it can push individuals to take risks, and productivity can increase.

At OPSITARA 2024 I presented the early findings of this research. I return in 2025 to present my final findings and recommendations. The methodology for this project is qualitative description (QD) overlayed with autoethnography. Data collection involved semi-structured interviews with Otago Polytechnic kaimahi and has provided deep insight into the impact of IP; woven through this insight is the researcher's autoethnographic approach.

Reflexive thematic analysis has been used to identify three themes:
1. Organisational impact on the imposter
2. The absence of leadership, belonging and connection
3. Bringing the imposter out of the shadows.

The findings from my research include support mechanisms designed to increase the visibility of IP and increase a sense of belonging and connection for kaimahi. The impact of IP is not going away, but it doesn't have to be as debilitating as it can be for some. The outcomes of this research are intended to alleviate the debilitation and provide recommendations to increase the positive impact IP can have.

Author
An experienced leader with over a decade of experience in the tertiary education sector, Sherie Bell is currently Project Lead at Otago Polytechnic where she continues to drive innovation and excellence. Sherie is presenting insights from her Master of Professional Practice research.

Paper ID: 44

Embedding Te Ao Māori in architectural education: Comparing student reflections and professional competencies

Bernadette Muir (Ara Institute of Canterbury)*

This research investigates how student reflections from an Indigenous-led architecture project align with professional competencies outlined in the New Zealand Registered Architects Board (NZRAB) and Ngā Aho consultation on the National Standard of Competency for Architects (NSCA). It compares two datasets: anonymised student feedback from a reflection workshop at Rāpaki—structured around kaitiakitanga (guardianship), impact, and challenges—and the Te Ao Māori-focused NSCA competencies (SNZ PC 3, 8, 17, 27, 36, 45).

Using qualitative thematic analysis, themes were coded inductively and cross-referenced with competency descriptors to identify areas of alignment and divergence between student learning and professional expectations.

Preliminary findings indicate strong alignment in cultural awareness, relational values, and partnership principles, alongside uncertainty about translating Te Ao Māori principles into design resolution and assessment—echoing concerns raised in NZRAB's 2025 consultation feedback.

The research identifies implications for curriculum development and professional preparation, suggesting that deeper integration of reflective practice can strengthen alignment between student learning and evolving national competency frameworks, particularly regarding Indigenous knowledge and values.

Author
Bernadette Muir is Principal Academic Staff Member for Architecture at Ara Institute of Canterbury and a Distinguished Fellow of Te Kāhui Whaihanga NZIA. Building on extensive architectural and urban design experience, she researches sustainable design, collaborative approaches, and weaving mātauranga Māori into architectural education to better connect learning with real-world impact.

Paper ID: 45

Identity and the vernacular image

John Osborne (Ara Institute of Canterbury)*

My presentation considers how photographic practice can interrogate dominant cultural narratives and offer an opportunity to consider our relationship to place, memory, and identity in Aotearoa New Zealand. Drawing on my recently completed MFA project, which documents field-based journeys across the South Island, I investigated how seemingly ordinary or overlooked environmental subjects, such as benches, hedges, power stations, and memorials, carry layers of cultural meaning and historical resonance. These everyday scenes, though quiet in tone, become sites of narrative tension between personal memory, colonial mythologies, and national identity.

My research situates these images within both local and international photographic traditions, drawing theoretical insight from ideas around semiotics, panopticism, and the sociology of culture. The project examines how cultural capital is embedded in visual form, and how images mediate social and historical values. Importantly, I reflect on the South Island Myth, a narrative of untouched landscapes and rugged character, and its persistence in cultural memory, while also acknowledging the limitations of a solely Pākehā perspective.

By navigating the intersection of personal and collective memory, the natural and the constructed, my ongoing photographic practice aims to explore shared environmental values, evoke romantic and subversive undertones, and reconsider how vernacular imagery contributes to evolving understandings of identity in contemporary contexts.

Author

John Osborne is a tutor in the Art and Design Department at Ara Institute of Canterbury and recently completed a Master of Fine Arts in Photography. John's work reflects a strong connection to Te Waipounamu, the South Island of Aotearoa New Zealand, exploring how built and natural environments shape our shared relationship to place. Through image-making and critical reflection, he examines the cultural narratives and environmental histories that define this landscape.

Paper ID: 46

Building a "pracademic" research culture

Suzanne Hodgson (Ara Institute of Canterbury)*

Background: The ITP sector is focused on providing work ready graduates where the majority of programmes are applied and where lecturers are most frequently employed due to their extensive industry-based experience. The traditional route into academia, e.g., undergraduate to PhD, is rarely the pathway for these academics. However, teaching on a degree programme requires kaiako to be research active to ensure that teaching and learning is underpinned by evidence-based theoretical knowledge to equip ākonga with research skills and to develop their critical thinking. The conflict between industry experience (work-based/clinical currency) and academic credentials (academic currency) could not be better exemplified than in academic nursing teams where students value teaching which is grounded in clinical knowledge and experience.

Research questions: How can we create a culture of research activity when the majority of academics in ITP's have not undergone a research apprenticeship? How do we create an appetite for research activity when Kaiako are frequently over-stretched and required to prioritise teaching and the supervision of students undertaking placements?

Methods: Underpinned by auto-ethnographic methodology and reflexivity, the development of an inclusive and nurturing research culture will be exemplified through the eyes of a research lead. This presentation will provide insight into the multi-faceted approach to developing an engaging and positive research environment in a large nursing team. The ideas and approaches have a foundation in the evidence base of "pracademia" and explore how to build researcher capability in teams of predominantly industry-based experts.

Application: With industry knowledge and connections as a foundation, there is huge potential to grow applied researchers in the ITP sector. Building capability and confidence in-house has the potential to raise the profile of research in our sector and to retain talented new, emerging, and experienced researchers.

Author

Dr Suzy Hodgson is a principal academic staff member at Ara Institute of Canterbury and a research lead in nursing, midwifery, and medical imaging. She is an active researcher exploring transitions to fatherhood and regularly engages with community organisations to ensure her research is applied and relevant. With a background in nurse education and in exploring the concept of "pracademia" Suzy is passionate about the transition to academia for clinical nurses and building research capability.

Paper ID: 47

NICU Dads

Suzanne Hodgson (Ara Institute of Canterbury)*; Rebecca O'Callaghan (Ara Institute of Canterbury)*; Gabriela Bantas (Ara Institute of Canterbury)*; John Withington (Ara Institute of Canterbury)*; Kate Pearson (Ara Institute of Canterbury)*

Background and aims: Internationally, there has been a growth of research concerning men's transitions to fatherhood but a dearth of studies in Aotearoa New Zealand especially in the context of the Neonatal Intensive Care Unit (NICU). The usual stress of initial fatherhood is amplified when a baby requires NICU care and transitions to fatherhood during this time are frequently accompanied by experiences of birth trauma and unwell partners, with fathers often, initially at least, navigating this space alone. The unique cultural landscape of Aotearoa New Zealand means that, whilst previous studies may be transferrable to this context, exploring this phenomenon locally would provide a valuable insight into fathers' experiences of NICU and provide a contemporary evidence base for services working with new families across the country.

The team will present the findings of two surveys undertaken in NICU alongside the present qualitative study which explores the transitions to fatherhood in the context of NICU and beyond.

Method: For the present study, a qualitative study underpinned by interpretivist methodology will be undertaken using qualitative interviews and a qualitative questionnaire. Recruitment will take place both locally and nationally via purposive sampling aided by practice partners and targeted social media strategies. The study has been approved by ethics and has undergone Māori consultation.

Results: Preliminary findings will be presented. Thematic analysis has not yet taken place. Qualitative data will be analysed using reflexive thematic analysis to construct themes which authentically reflect fathers' experiences of their transitions to fatherhood in the inpatient and post-NICU context.

Conclusion and implications: The findings will provide a contemporary evidence base for healthcare providers whose role is to care for infants and support new parents during this time both locally and nationally. It will be of interest to other researchers exploring experiences of NICU in similar contexts to Aotearoa New Zealand.

Authors

Rebecca, Gabriela, John, and Kate are academic staff members in nursing, midwifery, and medical imaging at Ara teaching a variety of courses across the three degree programmes. They are active members of the fatherhood research team led by Dr Suzy Hodgson and together they explore the health and wellbeing of fathers during the perinatal period. The team have presented internationally and collaborate with a range of groups and organisations to promote father-inclusive healthcare practices.

Dr Suzy Hodgson is a principal academic staff member at Ara Institute of Canterbury and a research lead in nursing, midwifery, and medical imaging. She is an active researcher exploring transitions to fatherhood and regularly engages with community organisations to ensure her research is applied and relevant. With a background in nurse education and in exploring the concept of “pracademia” Suzy is passionate about the transition to academia for clinical nurses and building research capability.

Paper ID: 58

The effect of different swim cap shapes and surfaces on drag

Helen Marshall (Ara Institute of Canterbury); Lindsey Alton (Ara Institute of Canterbury)*; Nay Lin Oo (Ara Institute of Canterbury); Graeme Harris (Ara Institute of Canterbury); Michael Hamlin (Lincoln University); Peter Olsen (Ara Institute of Canterbury)

Research on the drag caused by swim caps has predominantly focused on male swimmers with short hair, which produces a dome-shaped swim cap. However, we observed that a dome shape may not represent the swim cap shape of most elite female swimmers in backstroke, who typically fashion their hair into a bun. We also observed that the Arena Aquaforce wave swim cap used by swimmers in the Paris Olympics had a unique undulating surface, which according to the manufacturer's website reduces water drag significantly for perfect glide. Consequently, we investigated the effect of different swim cap shapes and surfaces on aerodynamic 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. A model head with long hair was fixed in a horizontal position to represent the head position in backstroke. Drag was measured for two swim caps (Arena smooth and Arena undulating) in five conditions: Low Bun (LB), High Bun (HB), Pineapple Bun (PB), Messy Bun (MB) and Aero Bun (AB). Drag was also measured for each hairstyle with no cap (control). The LB condition produced 28% more drag (>10g, $p<0.001$) than all other conditions, independent of swim cap surface. There was no significant difference ($p=0.06$) between the lowest undulating and smooth swim cap conditions (PB undulating vs HB smooth, 30.44g vs 30.59g). The LB shape produced approximately 28% more drag than all other swim cap shapes. Therefore, long haired backstroke swimmers should not wear a low bun in competition. In contrast, they should wear a HB, PB, MB or AB to minimize drag. Additionally, there was no advantage or no significant difference in drag when using a swim cap with a smooth or undulating surface.

Authors

Lindsey Alton is a mechanical engineering lecturer at Ara. Originally from the UK, she came to NZ to do a PhD in cycling aerodynamics where she worked with BikeNZ to help improve athlete performance for the London 2012 Olympics. Her research interests are sports engineering, aerodynamics and engineering education. She enjoys running and mountain biking in the Port Hills in Christchurch, and spending weekends away tramping when time allows.

Helen Marshall, PhD, is a Senior Lecturer in the Department of Nursing, Midwifery and Allied Health at Ara. She is the co-ordinator for the Bachelor of Applied Science, specialising in Physical Activity and Health Promotion. Her main teaching areas include anatomy and physiology, research design, lifestyle and health, and health promotion. Helen's research interests include health promotion, nutrition, sport and exercise particularly relating to the prevention and management of chronic disease.

Paper ID: 63

Workplace Chat 2.0

Rachel Byars (Otago Polytechnic)*; Helen Geytenbeek (Otago Polytechnic); Rachel van Gorp (Otago Polytechnic); Caryn Hayes (Otago Polytechnic)

This study explores the essential skills and behaviours that enable graduates to become effective workplace communicators and how educators embed these into the curriculum. It focuses on technological shifts, intergenerational differences, and the challenges of technology-mediated communication.

Initial research used the Delphi methodology. A panel of 10 experts participated in three iterative rounds of data collection and analysis to examine the role of communication in the workplace. Their responses helped identify the key skills business graduates need.

Results from the Delphi informed a comprehensive survey, sent to 129 recent business graduates from 2019 to 2024. The survey examined graduates' perceptions of their communication skills and the relevance of their academic studies to their current roles. It received 45 responses.

Findings highlighted the importance of personalising communication through self-awareness, empathy, adaptability, and selecting appropriate channels. Graduates and experts agreed that tailoring communication to suit the audience is essential. Traditional communication processes remain important, with both groups emphasising the need for clear message transmission and comprehension.

The study emphasises the vital role educators play in preparing graduates for the modern workplace. Graduates felt their degrees helped them become confident communicators. To support this, curricula should model effective communication, self-awareness, and empathy across various settings, with a continued emphasis on traditional methods.

Educators have a clear mandate to integrate these essential skills into programmes to ensure graduates are truly "work-ready."

Authors
Rachel Byars, Helen Geytenbeek and Rachel van Gorp are all Principal Lecturers in the School of Business, Otago Polytechnic, with a key interest in ensuring that the curriculum for business ākonga meets workplace environment needs.

Paper ID: 64

Exploring neurodiverse learners' use of artificial intelligence in tertiary education

Phil Osborne (Otago Polytechnic)*; Mairead Fountain (Otago Polytechnic)*; Rachel van Gorp (Otago Polytechnic)*

As artificial intelligence (AI) becomes increasingly embedded in educational practice, understanding its impact on diverse learner populations is critical. This research investigates how neurodiverse (ND) ākonga engage with AI tools to support their learning in tertiary education. While mainstream educational discourse often promotes AI's transformative potential, there is limited insight into how ND learners are already using these technologies. This project explores areas such as what challenges ākonga face, and what practices they have developed independently of formal instruction. The conference presentation will discuss preliminary findings—anticipated by the time of the conference—that will inform guidance for kaiako (educators) on supporting ND learners in their AI use.

Using an ethnographic methodology, the study centres the voices of ND learners through semi-structured interviews. The research aims included uncovering best practices, identifying barriers to adoption, and exploring the perceived benefits of specific AI tools across a range of ākonga experiences. These will include elements such as different disciplines, e.g. business and nursing, as well as levels of qualifications (certificates to postgraduate qualifications), and attitudes to technology.

Findings aim to help shape inclusive teaching strategies and promote equitable access to AI-enhanced learning. The project is likely to contribute to a more inclusive, effective, and innovative tertiary education environment. There are also likely implications for policy, practice, and sector-wide adoption of AI technologies. This project reflects the OPSITARA kaupapa by connecting research, professional practice, and community engagement in a meaningful and responsive way.

Keywords: neurodiversity, artificial intelligence, inclusive education, tertiary learning, ethnographic research

Authors

The presenting team is a collective of education practitioners united by a shared commitment to exploring the transformative potential of technology in learning. With diverse backgrounds and experiences, they bring a rich mix of perspectives to the conversation around AI in education. Their current research is driven by a common focus on enhancing the tertiary experience for neurodivergent learners, aiming to create more inclusive and responsive learning environments.

Paper ID: 66

Photographing an absence—Witnessing the disappearance of Hoiho

Astrid Erasmuson (Otago Polytechnic)

My research seeks to better understand how photography communicates the extinction that hoiho currently face, through emotionally engaging images and storytelling.

Tucked away in Ōtepoti on one of the wild beaches, you may be lucky to see one of the last mainland hoiho (or Yellow Eyed Penguin) heading towards their nest. They are blissfully unaware of the fact that they were voted Bird of the Year twice, in 2019 and again in 2024.

My research as a photographer began as a volunteer doing trap maintenance on one such wild beach. As I became more aware of the disappearance of and threat that these taonga species face, I was drawn to use the craft of photography to share the story with others.

Drawing upon methods such as reflexive photography, photo elicitation and documentation, I have become more aware of my own role as observer. I identify the value of the unique moments I am able to capture and experience through this project.

I draw upon a range of perspectives, from ecologists and conservationists to kaitiaki, to reflect on the risks and benefits of first-hand experiences with these precious birds. I consider the impact this project has had on me, as I become a witness to an extinction event.

The series of photographs I will show and discuss in my presentation explores the concept of photographing an absence. A future exhibition will consider a call to action for a wide New Zealand community and will help the audience better understand the implications of their behaviours on our at-risk species.

Author
Astrid Erasmuson is a Lecturer in Design Communication at Otago Polytechnic. Through her photography and graphic design practices she investigates native flora and fauna and the impact of human behaviour on these taonga.

Paper ID: 70

Industry-aligned programming education: Informing a shared curriculum for ITPs

Daniel Dang (Eastern Institute of Technology); Matt Hamilton (Nelson Marlborough Institute of Technology)*; Grayson Orr (Otago Polytechnic)

This study investigates the alignment between software development education and industry requirements across New Zealand's Institutes of Technology and Polytechnics (ITPs). An online cross-sectional survey was conducted between February and March 2025, distributed through industry partners and professional networks affiliated with three ITPs: Eastern Institute of Technology, Otago Polytechnic, and Nelson Marlborough Institute of Technology. A total of 35 industry professionals participated, representing a range of roles—including technical, hybrid, and managerial positions (e.g., software engineers, architects, and engineering managers)—and geographic regions such as Otago, Tasman, Hawke's Bay, Auckland, Nelson, Wellington, Canterbury, and Waikato. The survey instrument comprised both closed-ended items (e.g., tick-box lists for programming languages, frameworks, tools/technologies, and AI use cases) and open-ended prompts focused on Object-Oriented Programming (OOP) practices, perceived skills gaps, and curriculum recommendations.

Quantitative data were analysed using descriptive statistics (frequency distributions), while qualitative responses underwent rapid thematic analysis. The findings reveal widespread use of JavaScript, C#, and Python; broad adoption of frameworks such as React, .NET, and Node.js; and growing reliance on cloud platforms and AI-assisted development tools (e.g., for code generation, debugging, and learning support). Reported skills gaps were concentrated around design patterns, testing and exception handling, and core programming principles (e.g., SOLID, DRY, YAGNI).

Based on these insights, the study proposes an industry-informed programming curriculum for ITPs that integrates foundational OOP concepts with contemporary development practices, including cloud computing, CI/CD pipelines, and responsible AI integration. Furthermore, the research identifies specific knowledge gaps within the current workforce, ensuring that the proposed curriculum addresses critical areas for skill enhancement and better prepares graduates for evolving industry demands.

Author

Matt Hamilton is a Senior Academic at Nelson Marlborough Institute of Technology, where he teaches on the Bachelor of Information Technology programme. With over 20 years of experience in web and software development, he brings both industry expertise and academic insight to his teaching. His research interests focus on software development practices, object-oriented programming, and technology education.

Paper ID: 73

Numerical analysis on the performance of different swim cap shapes

Nay Lin Oo (Ara Institute of Canterbury)*; Peter Olsen (Ara Institute of Canterbury); Helen Marshall (Ara Institute of Canterbury); Graeme Harris (Ara Institute of Canterbury); Lindsey Alton (Ara Institute of Canterbury); Michael Hamlin (Lincoln University)

Wind tunnel experiments conducted at the Ara Institute of Canterbury have shown that the drag experienced by a swimmer's head can vary significantly when its geometry is altered using a swim cap of different shapes. To further investigate these variations, a series of numerical simulations were conducted for different swim cap shapes on a model head: Low Bun (LB), High Bun (HB), Aero Bun (AB), and a reference head without a cap. Each head configuration was 3D-scanned and converted into individual Computer-Aided Design (CAD) model suitable for numerical simulation. All the numerical simulations were performed in a commercial computational fluid dynamic (CFD) package ANSYS- FLUENT 2024 R2. A k-epsilon turbulence model, based on the Reynolds Averaged Navier-Strokes (RANS) equations, was employed for the parametric study. To validate, and keep consistency, with the prior wind tunnel experiment, the fluid medium was kept as air at 10 m/s, which is equivalent to 1.76 m/s in water. Analysis of the simulations found drag produced by the different swim cap shapes varied between 0.367 N and 0.504 N, a variation of 37%, which was dependent on the different shapes of swim cap or no swim cap in the model. For example, without a swim cap, the head produced 0.371 N, and for the same head without hair and with a swim cap, it generates 0.376 N, i.e. an increase of 1.35% drag. Consequently, the hair bun position influenced the amount of drag being produced by the head, with lowest being in a small HB, which streamlined the flow, resulting in reduced net drag. Since the study was intended to aid female swimmers with long hair who typically wear their hair in buns, swimmers with long hair should use a HB not a LB, which also confirms prior wind tunnel research outcomes.

Author
Dr Nay Lin Oo is a Lecturer in Mechanical Engineering at Ara Institute of Canterbury, specializing in fluid dynamics, aerodynamics, CFD, and FEA. He holds a PhD from the University of Auckland and has extensive research experience in unsteady aerodynamics of UAVs, wind tunnel testing, and high-performance numerical simulations.

Paper ID: 74

Industrial automation of small electronic component handling using collaborative robot

Nay Lin Oo (Ara Institute of Canterbury)*; Ian Chesterman (Ara Institute of Canterbury); Leon Chen (Ara Institute of Canterbury)

With the global rise in automated manufacturing and assembly systems, collaborative robots (COBOTs) have become integral components of modern production lines. These robots perform repetitive tasks such as assembly, packaging, welding, and various pick-and-place operations. Designed to work safely alongside humans, COBOTs provide high precision and consistency in repetitive industrial processes. While they are widely deployed in vehicle assembly lines, COBOTs are often customized for specific applications, raising questions about their adaptability to other sectors—particularly in precision-driven environments such as electronic component assembly and Printed Circuit Board (PCB) manufacturing. To explore this adaptability, a feasibility study was conducted using a UR5e COBOT with a repeatability of ±0.03 mm. The experimental setup includes a parallel gripper, a vacuum gripper, three proximity sensors, and a small conveyor belt. This configuration enables the evaluation of different gripping techniques, automated object detection, and material handling processes for small electronic components, specifically PCB shielding parts. With the supplied tray, one operation cycle takes about 418 s resulting to 8.36 s/shield, where the maximum operating output from the COBOT is found to be 430 shields/hour. Hence, majority of loading the shield takes nearly 38% and empty return is about 34%. It was also noted that while operating alone, the COBOT's accuracy on its task is sitting at 100%, whereas combining with other equipment, such as conveyor belt, modified vacuum gripper attachment, proximity sensor and supplied tray samples, the optimum accuracy drops to 88%. Hence, this can be further be improved by fine-tuning the integration between the COBOT and other equipment, which has been left for future work.

Author
Dr Nay Lin Oo is a Lecturer in Mechanical Engineering at Ara Institute of Canterbury, specializing in fluid dynamics, aerodynamics, CFD, and FEA. He holds a PhD from the University of Auckland and has extensive research experience in unsteady aerodynamics of UAVs, wind tunnel testing, and high-performance numerical simulations.

Paper ID: 75

Aero-acoustic study of 3-bladed offset multi-rotor propeller

Nay Lin Oo (Ara Institute of Canterbury)*; Graeme Harris (Ara Institute of Canterbury); Lindsey Alton (Ara Institute of Canterbury)

Aero-acoustic noise has become a significant factor in the drone industry, as audible noise from propellers can disturb both humans and native species in urban and forested areas. This study investigates the effect of vertical blade displacement on the acoustic and aerodynamic performance of a small UAV propeller. A standard two-bladed APC 1045 MR propeller was modified by adding a third blade while retaining the original blade profile, with the third blade aimed at improving stability and examining coherent noise interactions. The investigation combined experimental testing and Computational Fluid Dynamics (CFD) simulations using ANSYS Fluent. Experiments covered a propeller speed range of 1750–5100 rpm, with thrust, torque, and acoustic signals measured simultaneously via two separate data acquisition systems. CFD simulations employed an Unsteady Reynolds-Averaged Navier–Stokes (URANS) approach with a k–ω SST transitional turbulence model at a constant speed of 4770 rpm (500 rad/s). Four virtual microphones were positioned evenly at 1 m from the propeller hub. Three propeller configurations were tested: normal, offset 1, and offset 2, where the offset configurations involved vertically displacing the blades in different arrangements. Experimental SPL ranged from 61.5–71.5 dB, with offset configurations consistently producing lower noise. CFD results deviated by a maximum of 5.21% from experimental aerodynamic values, and average spatial sound levels across configurations were 70–73 dB. Frequency-domain analysis revealed the emergence of an additional peak at 79.3 Hz at 4770 rpm, corresponding to the single-blade passing frequency, while the dominant tone at 238 Hz corresponded to the three-blade passing frequency. Similar trends were observed in both experiments and CFD spectral analysis. Aerodynamic variations in thrust and torque were negligible except at low rotational speeds, where torque differences were primarily driven by the vertical blade offsets.

Author
Dr Nay Lin Oo is a Lecturer in Mechanical Engineering at Ara Institute of Canterbury, specializing in fluid dynamics, aerodynamics, CFD, and FEA. He holds a PhD from the University of Auckland and has extensive research experience in unsteady aerodynamics of UAVs, wind tunnel testing, and high-performance numerical simulations.

Paper ID: 79

Housing sustainability, performance, and affordability

Chris Fersterer (Otago Polytechnic)

Addressing sustainability in housing is a key component to lessening the environmental impact of human activities on the planet. In addition, liveable, comfortable, high performing homes should be achievable goals or expected outcomes for all. Unfortunately, these expectations have tended to elevate building costs, but are there opportunities to reduce construction costs, and provide more high performance and sustainable outcomes? This research follows the design development of a small dwelling that focuses on opportunities that are often overlooked in common construction practices. The process identifies some key practices impacting sustainability, performance, and affordability with the construction of many homes and applies strategies to reduce these.

To look at housing in New Zealand through a sustainability lens, it is useful to define some parameters such as, the New Zealand green building Council's (NZGBC) Homestar rating system. Homestar assessment is divided into four categories that form its key foundations:

1. Efficient
2. Healthy and Comfortable
3. Liveable
4. Environmentally Responsible.

Within each category are credits that address specific areas relating to these categories. The categories provide a useful framework to follow and have been considered as a motivator for a design solution. The design has now gone through multiple iterations and a second design using typical construction practices has been developed to reference as a baseline. Initial comparison of performance elements and material efficiencies compared to those of the benchmark design indicates that some simple design solutions can have significant impact. While affordability has not been directly assessed, material and labour efficiencies would assume a corresponding reduction in cost. The project now moves to the developed design phase to be followed by consent and construction. It is hoped that the build will provide further data that supports change in current building practices.

Author

Chris Fersterer is a senior lecturer currently teaching in the Bachelor of Architectural Studies and has 35 years teaching experience at Otago Polytechnic including 15 years teaching ceramics in the School of Art before re-training in architecture and design. Experiential learning has benefited his own learning; it informs his teaching pedagogy using construction of both physical and digital models to help understand complex systems or explore design solutions.

Paper ID: 85

Ākonga expectations activities

Gary Barclay (Otago Polytechnic)*; Shannon Booth (Otago Polytechnic); Kathryn Van Der Vliet (Otago Polytechnic)

In the context of increasingly diverse classrooms and evolving educational expectations, kaimahi | teachers are challenged to adopt flexible and innovative approaches that meet student and staff needs and foster active engagement in learning. This abstract is part of a series of presentations from the Institute of Sport, Exercise and Health at Otago Polytechnic on the teaching initiatives used throughout the Bachelor of Applied Science and New Zealand Certificate of Exercise programmes. This presentation will discuss our use of a set of ākonga expectations activities. The primary purpose of the ākonga expectations activities is to support first year Bachelor of Applied Science (BAppSci) student connection and engagement in our Programme. These activities are theoretically underpinned by Self-Determination Theory. Specifically, this initiative involves ākonga discussing a series of questions relating to motivation for their programme and their expectations of themselves and kaimahi in small groups and sharing their responses with the rest of their cohort. Data was collected via reflections from the authors who were kaimahi involved in running these activities. These reflections were collected through verbal discussion and provide a first-hand perspective regarding drawbacks and successes of this initiative. Kaimahi reflections suggest that running these activities may not have large or long-term impacts on ākonga motivation or engagement. However, additional kaimahi reflections indicate there may be other benefits to running these activities with ākonga, for example, gauging confidence levels and ākonga ability to work in groups. These reflections will be discussed along with suggestions for future research in this area, including seeking feedback from ākonga and identifying strategies used by other tertiary institutions to increase ākonga engagement. It is hoped that this presentation will generate further discussion and research looking at strategies to enhance ākonga engagement.

Author
Gary Barclay is a Principal Lecturer in sport, exercise and health-related psychology at Otago Polytechnic's Institute of Sport, Exercise and Health. Gary currently enjoys coaching youth sport, mental skills consulting and keeping active.

Paper ID: 88

Holding the centre: Artist-led infrastructure, curatorial practice, and indigenous modes of making space

Hayley Walmsley (Provocation Station)*; Nikita Rewha (Otago Polytechnic)*

Research and funding frameworks in Aotearoa still reflect colonial logics that prioritise outputs over process, competition over connection, and visibility over care. For Māori, Indigenous, and other marginalised artists, this often means choosing between survival and integrity, or bending kaupapa to fit systems never designed with us in mind. The result is precarity dressed as opportunity, visibility without support, and scarcity treated as inevitable.

Māori artists need time, space, and money to survive. Yet the systems we work within rarely provide those conditions. This paper draws on kaupapa Māori creative practice research, grounded in the lived curatorial and artist-led experiences of the authors, to explore how Māori artists build and sustain their own infrastructures. Practice here is both method and outcome, an iterative process of making, reflection, and relationship that generates knowledge through lived experience rather than detached analysis.

The presentation introduces two emerging frameworks shaped through this practice. The first, the artist-curator as pou, repositions the artist-curator as infrastructure: a grounding structure that holds kaupapa in place and takes its form from it, creating connection and reciprocity within creative ecosystems. The second, the cycle of Te Korekore, Te Pō, and Te Ao Mārama, offers a living methodology of potential, becoming, and emergence. Te Korekore holds the unseen and formless; Te Pō is the realm of gestation and transformation, and Te Ao Mārama marks emergence into light and action, always as part of a continuing cycle rather than a final endpoint.

Together, these frameworks propose Indigenous ways of making space that are cyclical, relational, and kaupapa-aligned, offering pathways toward sustainable artist-led infrastructures that hold the centre on our own terms.

Authors
Hayley Walmsley (Ngāti Kawau, Ngāti Tautahi, Ngāpuhi) is Director of Provocation Station. An artist–curator and writer, her work explores kaupapa-led infrastructures and uses writing as research to build Indigenous ways of holding space through text, photography, and community.

Nikita Rewha (Ngāpuhi, Ngāti Wai) is Kaiāwhina Rākahau at Otago Polytechnic and a founding member of Provocation Station. Her practice engages with place, whakapapa, and storytelling, exploring how memory and whenua shape Indigenous knowledge, identity, and belonging.

Paper ID: 89

The use of Patient-Reported Outcome Measures (PROMs) in clinical education

Zoe Steele (Ara Institute of Canterbury)

The use of PROMS in professional practice is established; however, use of PROMs in clinical education is unclear. The objectives are to determine how and why PROMs are used in clinical education in the broadest sense; potentially including modes of use, methods of implementation, specific treatment modalities, and logistical considerations in data collection of patient outcomes, as teaching tools, to encourage patient-centered practice, and/or to meet learning needs of students.

PubMed, EBSCO (CINHAL Ultimate) CINAHL, Cochrane, Gale Health and Wellness, ProQuest, PubMed, Science Direct and IJOM databases were searched using these terms: “patient-reported outcome measures,” “student-led,” “student-run,” clinic,* “teaching,” “clinical education,” “student,” and “health education.” Two authors independently screened titles and abstracts to identify relevant articles for inclusion. Peer-reviewed articles published in English in academic journals from all health disciplines, and all methods were included. Studies that strictly discussed patient education or the use of PROMs in professional practice were excluded, and then the remainder were evaluated based on aim, method, findings, strengths, and weaknesses.

Twenty-six studies employing various methodologies and from all geographic locations were reviewed. The majority used validated tools to measure patient demographics, patient satisfaction, perceptions or outcomes of treatment, evaluations of healthcare services, and barriers to or increasing levels of service use in a variety of clinical contexts.

The use of PROMs by stakeholders including patients and clinicians is important for individual care decisions, healthcare leaders, and quality improvement staff for performance monitoring, and researchers and policymakers for health system analysis and quality improvement initiatives. Contextual limitations of the evidence exist. The use of PROMs in clinical education could be expanded, to provide evidence for the use of treatment modalities, encourage its use in professional practice, and as a teaching tool for evidence-based and patient-centered practice; however, further research is required.

Author
Zoe Steele, BClinSci, MOstMed (Southern Cross University), NZ Cert TT, is a clinical osteopath, senior academic staff member, and satellite clinic lead at Ara Institute of Canterbury in Christchurch New Zealand. She teaches clinical practice, pathophysiology, pharmacology, and dilemmas of patient management. Zoe’s current research areas of interest include clinical education, osteopathy in the community setting and codes of conduct for professional health programmes.

Paper ID: 92

How aeronautical engineering tutors manage their emotions at work, accommodate changes, recognise potential burn-out, and consider their wellbeing as well as that of the organisation

Judith McFarland-Hill (Otago Polytechnic)

With constant and significant changes rapidly flowing across every facet of the education sector, my research aim is to explore how aeronautical tutors manage their emotions and consider their wellbeing at work. Following my OPSITARA 2024 presentation (#40), I now present my results, with three key themes: Tutor identity, Environment, and Learner success. I will discuss these and sub-themes identified, noting one particular unexpected development. Finally, I will show how the research answers my inquiry topic.

The themes were developed from my qualitative methodology approach, where semi-structured questions delivered in one-to-one interviews encouraged sample aeronautical participants to introspect on their professional behaviour. I drew on an interpretative, reflective, thematic analysis approach to develop the themes.

My research outcomes offer important insights into how tutors manage their emotions, and the environment from which these emotions arise. With this, all stakeholders can benefit from reviewing the holistic training ecosystem which impacts tutor wellbeing. My goal is that the recommendations will generate appropriate actions to be developed which will lead to enhanced job satisfaction, employee retention, learner success, organisation sustainability, and, importantly, to confidence in our tertiary training future.

Author

Judith McFarland-Hill spent 30 years in aeronautical business and marketing development in the USA. She embarked on the Master of Professional Practice in 2019 and returned to New Zealand where she was employed in a business support role for an aviation tertiary organisation. Aiming to bridge the gap between industry and academia, Judith brings important insights to the study of aeronautical engineering tutors whose wellbeing impacts future tertiary and industry personnel, and organisation sustainability.

Paper ID: 106 (Research Poster)

The potentiating effects of different warm-up protocols on sprint cycling performance

Tyson Huia (Ara Institute of Canterbury)*; Hennie Pienaar (Southern Institute of Technology); Peter Olsen (Ara Institute of Canterbury); Phil Handcock (Otago Polytechnic)

Extensive research has shown that warm-up protocols can enhance exercise performance. Nevertheless, there is no published research on the effect of a modified band resistance (MBR) warm-up on cycling sprint performance compared to a standard resistance (SR) protocol or a standard warm-up (SWU). Fifteen participants initially volunteered; however, due to the COVID-19 pandemic, participation in the study decreased. Therefore, the original crossover design was adapted to a serial protocol (SWU → SR → MBR), with a one-week interval between each condition.

Seven participants (n = 7; age: 18 ± 2 years; height: 172.5 ± 4.2 cm; body mass: 66.9 ± 8.0 kg; training age: 16 ± 4 months; 3RM Back Squat: 67.5 ± 13.6 kg) completed all three warm-up protocols (SWU, SR, MBR) and subsequent sprint testing. Participants completed a supervised 20-minute warm up for each testing session, which included cycling on rollers for 15-minutes, followed by 5-minutes with focus activation, mobility, and potentiation. Cycling split times were recorded at 5 m, 10 m, 125 m, and 250 m . A repeated measures ANOVA (Jamovi v2.6.26) with Bonferroni post hoc corrections ($\alpha \leq 0.05$) revealed a significant difference between SR (1.49±0.07 s) and MBR (1.52±0.07 s) at the 5 m split (mean difference = –0.034 s; $t(6) = -7.13$, Bonferroni-adjusted $p = 0.03$). Normality testing for the MBR 5 m split narrowly failed (Shapiro–Wilk $W = .81$, $p = 0.05$); therefore, a Wilcoxon signed-rank test was utilised, which confirmed the significant difference ($V = 0$, $p = 0.02$). No other pairwise comparisons for the different warm-up protocols at the various splits (5m , 10m, 125m, or 250m) reached statistical significance ($p > 0.05$).

Overall, there was minimal difference between the warm-up protocols and cycling times. The decrease in 5-m time in the MBR warm-up up maybe due to higher loading, which could have initially fatigued the cyclists. However, more research with larger sample sizes and a crossover design is needed to validate our findings.

Author

Tyson Huia (Ngāti Maniapoto, Ngāti Whātua, Ngāti Tama, Ngāruahine), MAppSc, is a Lecturer in Sport and Exercise Science. Previously, Tyson was a strength and conditioning coach in Southland, working with athletes across a variety of sports.

Paper ID: 114

Meeting a need: Inclusive design and real-world solutions

Andrew Wallace (Otago Polytechnic)

Product design is a discipline that responds directly to gaps in provision—moments where existing products, systems, or environments fail to meet the needs of users. In this context, inclusive design refers to the practice of intentionally shaping solutions that enable equitable use, particularly for individuals whose needs are not met by mainstream products. The contribution of product redesign is always material and practical: ideas become artefacts that can be held, tested, evaluated, and ultimately integrated into daily life.

Research aim: This presentation examines how inclusive product redesign can deliver effective, manufacturable solutions for users whose needs fall outside standard commercial offerings. Two case studies are presented. The first involved the redesign of a custom assistive hand, developed collaboratively with occupational therapists to address the functional requirements of a single user. The second focused on creating an adapted bathroom environment for young users where no off-the-shelf products were suitable. Both projects required iterative redesign, applied ergonomics, engineering principles and structured, real-time feedback from users and clinicians.

Methodology and evaluation: Effectiveness was assessed through structured user feedback sessions, ergonomic fit testing, and performance-based criteria defined with health professionals. Iterations were guided by measurable improvements in usability, safety, and comfort.

Findings: The resulting products demonstrated clear functional gains for users and highlighted how collaborative development with clinicians enhances both appropriateness and adoption. Insights included the value of rapid prototyping for clinical validation and the importance of tailoring interfaces and physical dimensions to the specific motor and cognitive capabilities of each user.

Implications for practice and teaching: These projects illustrate how inclusive product design can lead practice within interdisciplinary teams by translating clinical insight into safe, manufacturable outcomes. They also show how such live projects strengthen research-informed teaching: students observe inclusive design, prototyping, ergonomics, and user-led iteration in real settings rather than solely through theoretical instruction

Author
Andrew Wallace is a Senior Lecturer in Product Design at Otago Polytechnic. His research and teaching focus on medical devices, inclusive design and design for manufacture. He is particularly interested in how product design can deliver real-world solutions that benefit society, combining industry expertise with human-centred approaches to improve health, independence, and community wellbeing.

Paper ID: 120

Ākonga perspectives of the value and challenges of oral assessment

Alexa Andrew (Otago Polytechnic)*; Rachel Sayers (Otago Polytechnic); Kristy Richards (Otago Polytechnic)

Context: Occupational therapy ākonga undertake oral assessments (OA) throughout their three-year undergraduate programme at Otago Polytechnic. Ākonga are required to present their professional reasoning in relation to a case scenario following the occupational therapy practice process. These OAs are seen by kaimahi as crucial preparation for fieldwork placement where ākonga are required to articulate their professional reasoning. It is well known that the OA provokes anxiety among ākonga and it is their perspective of OAs that this research is focussed on.

Aim: The aim of this research was to explore ākonga perspectives of the value and challenges of the OA.

Methodology: The methodology was qualitative and focus groups were used to collect data. Thematic analysis of the focus group transcripts revealed four themes: Value of the OA; experiencing and managing anxiety; preparation for OA, and the relationship matters.

Results: Ākonga recognised the value of OAs in terms of preparation for fieldwork, development of communication skills, and building confidence and that deeper learning is facilitated. OAs are inherently stressful for ākonga. Specific stressors included being questioned, the impact of anxiety on cognitive processing, and the fear of failure. Anxiety was managed through the use of breathing techniques, positive self-talk, and professional presentation at the OA. Preparation strategies included a variety of in-class exercises and outside the classroom ākonga engaged in recording themselves and practising by explaining concepts to a novice. It was revealed that the relationship between ākonga and the assessor in the OA mattered. Ākonga acknowledged that their assessor, who was also their lecturer in the course, was invested in their success.

Implications: This research provides valuable insights for kaimahi involved in conducting OAs and reflection on the process and the interpersonal interactions during OAs is encouraged.

Author

Alexa Andrew is a senior lecturer in the Te Kura Whakaora Ngangahau / The School of Occupational Therapy at Otago Polytechnic. Alexa has been an educator for the past 25 years and has a master's degree in Occupational Therapy. She is passionate about pastoral care and enabling student success. Her clinical experience involved working with older people in a variety of settings and much of her previous research has centred around the topic of residential aged care.

Paper ID: 121

Sparking enquiry: Fostering human-centred critical thinking strategies

Leana Scheffer (Otago Polytechnic)*; col Fay (Otago Polytechnic)*

In an era where artificial intelligence increasingly affects students' critical thinking capabilities, architecture educators are examining how human-centred skills like critical thinking remain central to professional practice. This study explores how different pedagogical approaches to critical enquiry may develop these essential competencies in postgraduate architecture students. Architecture education requires balancing academic rigour with professional qualification demands. Our study examines two complementary approaches to fostering critical thinking across sequential semesters: creative enquiry through architectural theory (Semester 1) and scientific enquiry through research methods (Semester 2). While both approaches engage students in the fundamental processes of analysis, evaluation, and synthesis, we suggest that each may develop different critical thinking orientations aligned with distinct professional competencies.

Using reflective practice methodology, both educators will examine the scaffolding of learning activities within their respective courses. Through this lens, theoretical pedagogy will be explored using Facione's critical thinking framework, emphasising interpretation, inference, and explanation skills. Research methods pedagogy will be analysed through Paul-Elder's systematic framework, focusing on evidence evaluation, assumption questioning, and logical reasoning. Observations suggest that while students progress through similar cognitive processes, the disciplinary focus may create differentiated critical thinking competencies. Theory courses appear to develop interpretive and conceptual skills, while methods courses seem to strengthen analytical and evaluative capabilities. This scaffolded progression may help prepare students for the multifaceted critical thinking demands of professional practice.

This research offers insights into how implicit pedagogical frameworks might shape student development, with potential implications for educators seeking to strengthen critical thinking across professional programmes. As AI tools increasingly challenge traditional learning approaches, understanding how to cultivate distinctly human critical thinking capabilities may become essential for preparing graduates who can navigate complex professional contexts.

Authors

Leana Scheffer is a Senior Lecturer and Postgraduate Programme Coordinator at OP's School of Architecture. Her research explores metacognition in pedagogy, research methodology, phenomenology, and place.

Colleen Fay, Principal Lecturer at Otago Polytechnic's School of Architecture, researches architecture education pedagogy, especially studio practices in design and theory. She examines shared dialogues across creative disciplines involved in both physical and conceptual development.

Paper ID: 122

MPP research project: 'Breathing life into online learning and creating a collaborative cohort online'

Sarah Hexamer (Otago Polytechnic)*

This research seeks to explore how the experience of online learners can be more holistically aligned with that of on-campus cohorts by adopting a heutagogical approach that fosters self-determination, autonomy, and ownership in our learners. This qualitative research reflects my own autoethnographic personal journey and, importantly, that the voices of the participants are reflected consistently within my writing.

The formal inquiry explored several learning delivery models in the synchronous and asynchronous online learning experience. The primary focus was: 'Can we create cohort engagement and collaboration akin to being in the classroom?' The focus was specifically on online design and facilitation skills, including considering the effectiveness of available technology and cameras as tools for building collaborative cohorts. This research also considered the broader impact of online learning on learners' personal environments, when and how they accessed the learning, and any impacts on their family and work relationships.

A research assistant was employed to engage with potential participants, facilitate focus group sessions, and anonymise the transcripts to ensure the learner participants' confidentiality was maintained. Qualitative analysis of the focus group data was completed, and some key themes emerged through the formal enquiry of learner focus groups and the separate contracted facilitator. I also discuss informal enquiry-led feedback and reflective practice gained over several years as part of my own course delivery improvement planning activities

A key outcome is the development of a best-practice framework and toolkit, informed by participant feedback across diverse online learning experiences. This resource is intended to support educators and designers in cultivating collaborative, motivated, and engaged online cohorts across disciplines.

Conducted as part of my Master of Professional Practice, the study operates under ethics approval 194/194a.

Author

Sarah Hexamer has worked in the public, private, and government sectors for over 30 years. Sarah joined the tertiary education sector in 2020 to lead the BEngTech Asset Management Degree Apprenticeship Model. This included developing and delivering the asset management stream of courses as synchronous online learning, integrating industry subject matter experts in the weekly delivery. She has a GDTE and aims to complete her Master of Professional Practice in December 2025.

Paper ID: 124

Digital heritage: From decay to data

Sarah McCallum (Otago Polytechnic)*; Blair Isbister (Otago Polytechnic)*

This presentation explores the value of digitally documenting our built heritage as an essential practice for conservation, research, and education. Beyond the internationally recognised heritage architecture that characterises the urban fabric of Ōtepoti Dunedin, the city is also home to numerous structures that are smaller and more remotely located, yet still historically significant. Many of these are under the care of private owners / community trusts, with limited resources for protection against deterioration and decay. We argue that digital documentation can offer a valuable solution for these structures, creating a new model for how we interact with our past.

This research focuses on a series of rural structures managed by the Hereweka - Harbour Cone Trust, comprising several barns / outbuildings and an historic cottage. These structures are inherently vulnerable—some are marked for demolition, others are awaiting repair, some cannot be entered due to instability. Working around the lambing season, weather, and structural issues, this small but significant part of our history is being systematically documented to create accurate digital twin models through point-cloud scanning and photogrammetry. Alongside this, the study examines the pedagogical benefits of involving ākonga in the digitisation process, providing hands-on experience in digital documentation and heritage preservation techniques.

The resulting digital twin data offers a range of benefits to the Trust and the broader community. They provide an accurate record of these structures as they stand today, offering a benchmark against physical deterioration and supporting the planning of future interventions. They are also powerful tools for education, increasing accessibility to heritage through the sharing of digital files. This is not just a technical process, but a strategic investment in our cultural legacy. We see digital technologies as a cornerstone of modern heritage management and a crucial means of safeguarding our shared history for future generations.

Authors

Sarah McCallum is a Senior Lecturer at the Otago Polytechnic School of Architecture and teaches across a range of courses in the undergraduate and postgraduate degrees. She has a foundation in architectural design and is passionate about the juncture between educational pedagogy and vocational practices. Sarah's research centres around the interrogation of educational practice in an environment that is experiencing rapid change, with a focus on architectural history and New Zealand’s built heritage.

Blair Isbister is a Senior Lecturer at the Otago Polytechnic School of Architecture, with a focus on architecture, design, and Building Information Modelling (BIM). He is passionate about bridging the gap between academic learning and industry practice and works closely with both ākonga and professionals to develop clear, practical knowledge in a fast-evolving field.

Paper ID: 126

Evidence of *Leptospira* spp. in dogs in the Kingdom of Tonga

Kristina Naden (Otago Polytechnic)*; Kate Harder (Unitec Institute of Technology); Carolynne Joone (James Cook University)

Despite world-wide importance as a potentially serious zoonotic disease, little is known about leptospirosis in the Kingdom of Tonga. The disease is considered endemic in tropical nations such as Tonga, favouring the warm, humid conditions found in these countries, and is linked to outbreaks following adverse weather events. Transmission of the disease occurs via infected urine from species such as rats, cattle, and pigs. The proximity and frequent interactions between humans, dogs, cattle, and pigs in Tonga increases the risk of transmission between these species. The aim of this study was to investigate whether domestic dogs in Tonga showed evidence of exposure to *Leptospira* spp., as a sentinel for humans.

Dogs from various villages on the islands of Tongatapu and Vav'au that were submitted for surgery at a charity-led, veterinary mass sterilisation clinic, were recruited for the study. Most dogs were of mixed-breed and a range of ages, including puppies (defined as 16 weeks or under). Blood samples were collected via intravenous catheters placed prior to surgery, and sera underwent microscopic agglutination testing (MAT) for antibodies to a panel of 23 *Leptospira* serovars. The selected range of serovars was based on evidence of their presence in humans and other animals (cattle, pigs, and horses) in Tonga, and neighbouring Pacific Islands such as Fiji, Samoa, and the Cook Islands.

Of 181 dogs sampled, 12 (6.63%) showed evidence of exposure to one or more serovars of *Leptospira* species. The most common serovar was Pomona, detected in 7/12 (58.33%) positive dogs. Other serovars detected included Autumnalis, Ballum, Copenhageni, Cynopteri, Djasiman, and Pohnpei. These results are of interest due to the close relationship of dogs, humans, and other hosts of *Leptospira* spp. in Tonga, and the zoonotic nature of this disease. Future research planned focuses on a One Health approach, and includes environmental DNA assessment of standing water in Tonga, to determine the presence of *Leptospira* spp. in the environment, and testing of sera from cattle and pigs. Further, the implementation of a human screening programme would represent a critical step towards establishing a comprehensive understanding of transmission dynamics of this disease.

Author

Kristina Naden is a Senior Lecturer in veterinary nursing at Otago Polytechnic, and has been teaching veterinary nursing since 2009. She is a Registered Veterinary Nurse and is currently undertaking a PhD investigating the impact of therapeutic riding on horses. Her other key research interests are professional development for Allied Veterinary Professionals, and the application of a One Health perspective to animal health in the Pacific, with a particular focus on zoonotic diseases.

Paper ID: 127

Numerical simulation of sidecar aerodynamics for high-speed racing

Graeme Harris (Ara Institute of Canterbury)*; Nay Lin Oo (Ara Institute of Canterbury); Shuangjian Wei (Ara Institute of Canterbury)

Sidecar racing is a unique high-speed motorsport, where two riders jointly control a three-wheeled motorcycle, requiring both mechanical performance and aerodynamic stability. The side car which was developed for the current study is a Formula One (F1) equivalent racing machine in its category. Since the mechanical development of sidecar racing has reached the performance plateau, aerodynamic optimisation has emerged as a key pathway for competitive improvement. Therefore, in the current work, we have emphasised increasing the aerodynamic efficiency of the sidecar by attempting to reduce drag and increase the vehicle downforce. Currently, the use of ANSYS computational fluid dynamics (CFD) has given the advantage of being able to conduct multiple iterations of parametric study in a computer modelling environment until the final build of the prototype.

An existing racing sidecar was 3D-scanned and converted to an acceptable file format to utilise in CFD simulation. With the help of flow visualisation in CFD, the critical area around the sidecar was identified, which was further refined to achieve an improved aerodynamically efficient sidecar. After adjusting the passenger's posture (especially when traveling straight), the torso was hidden as much as possible behind the sidecar, and the drag decreased by 12.9N. Further adjusting the height and angle of the windscreen while bringing it closer to the rider, a reduction was observed in lift and drag by 59N and 92.74N respectively, in left and right turns, whereas the drag appears to increase in a straight line. Based on the windscreen installation, a side screen was additionally mounted in front of the passenger, and the results showed that the drag was reduced by 22.2N and the downforce increased by 182.3N compared to only a windscreen mounted in front of the rider under the straight-line condition. This shows that the installation of the side screen can further optimise the aerodynamics of the sidecar.

Author

Graeme Harris is a Senior Lecturer in Mechanical Engineering and is actively involved in student projects and motor-racing.

Paper ID: 131

"How am I here? Why am I here?": The power of transformational learning in practice doctorates

Martin Andrew

The transformative learning capacity of work-based, work-integrated, and professional practice learning at postgraduate levels continues to attract attention in that it enacts processes of becoming and belonging. This in-built adult learning of heutagogical potential aligns with transformative learning theorist Jack Mezirow's widely applied yet still contentious reflective-change-action process. The study investigated the transformative potential of a doctoral programme. This paper contends that professional practice journeys learners experience in Capable New Zealand's Doctor of Professional Practice programme (DProfPrac) embody moments of transformation, realisation, and mostly (but not exclusively) positive change. The literature suggests that, by creating enquiry-led educative contexts, professional research propels the power to be transformative at the institutional, communal, interpersonal, and individual levels.

The study draws from two evidence sets: a series of 10 open-ended interviews with 10 completed graduates of the programme, and transcripts of two dialogues each with two soon-to-complete learners reflecting on their learning journeys so far using the method of dialectical autoethnography. The study is ethics approved (Otago Polytechnic #HRE15-173, 2020 and #1038, 2024) and the learner voices used with their approval. In this session, findings focusing on how learners and graduates identify transformation to have occurred will be reported, including the impetus towards increased researcher autonomy.

Findings include instances of value-add in the workplace, and critical reflection on moments of change, both lightbulb moments and those of resistance. The significance of the study lies in demonstrating the power of reflectivity as a multi-directional, reciprocity or ako-led strategy to understand adult learner transformation, enhance confidence in ongoing researcher autonomy, and ultimately build future-focussed capability and agency. Along with the concept of ako, this New Zealand-based study draws on the concept of kotahitanga, togetherness.

Author
Dr Martin Andrew has worked in a variety of educational and leadership roles in tertiary and Foundational education in New Zealand, Australia and Vietnam for almost 30 years. He has published over 120 refereed and journal papers, presented more than 100 conference papers internationally, participated as a researcher-writer in ten projects, and, by mid-2026, will have supervised 30 doctoral students through to completion including numerous professional doctorates.

Paper ID: 133

Beyond the course descriptor: Mapping the DNA of graduate success

Lindsey Alton (Ara Institute of Canterbury)*; Ian Chesterman (Ara Institute of Canterbury); Mohammad Ramezanian Pour (Ara Institute of Canterbury)

This research involved conducted a comprehensive analysis of how graduate attributes (GAs) are mapped and achieved across engineering programmes (BEngTech and NZDE) in all disciplines (civil, mechanical, and electrical engineering). Graduate attributes are a set of individually assessable outcomes set by the International Engineering Alliance (IEA) and are exemplars of the attributes expected of graduates from an accredited programme. There are eleven GAs within the engineering programmes, covering a mixture of technical and professional competencies: Engineering Knowledge; Problem Analysis; Design/Development of Solutions; Investigation; Tool Usage; The Engineer and the World; Ethics; Individual and Teamwork; Communication; Project Management and Finance, and Lifelong Learning. Previous research has shown that ākonga (students) often find professional skills uninteresting and the evidence students provide to show how they meet graduate attributes often comes from just a few courses from within the engineering programmes. Although each course descriptor states which GAs are achieved in the course, previous research has also found that students do not necessarily agree, and may cite other courses as evidence of meeting certain graduate attributes.

The aim of this research was to identify the distribution of GAs across the engineering programmes in all disciplines. A Python script was created to extract GA mapping from the Course Descriptors for all NZDE and BEngTech courses. This was cross-referenced with the courses available to each discipline to show the distribution of GAs by discipline. Initial results show that Engineering Knowledge and Problem Analysis are the most cited GAs and Lifelong Learning is the least cited across all disciplines in the BEngTech. For the NZDE, Engineering Knowledge, Problem Analysis, Teamwork and Communication were the most cited GAs and Ethics and Project Management and Finance were the least cited across all disciplines. These initial findings indicate some imbalance between technical and professional skills taught within engineering, especially in the BEngTech.
This research identified GAs that are not well represented in the engineering programmes, and highlighted the distribution of GAs between common, compulsory and elective courses across all disciplines. This helps highlight the importance of certain courses to ākonga in meeting the graduate profile and is useful for program development to help ensure professional skills are included in more courses within engineering.

Author

Lindsey Alton is a mechanical engineering lecturer at Ara. Originally from the UK, she came to New Zealand to do a PhD in cycling aerodynamics where she worked with BikeNZ to help improve athlete performance for the London 2012 Olympics. Her research interests are sports engineering, aerodynamics and engineering education. She enjoys running and mountain biking in the Port Hills in Christchurch, and spending weekends away tramping when time allows.

Paper ID: 134

Gathering at the edge of chaos: Rethinking rigour through creative restorying

Samuel Mann (Otago Polytechnic)*; Ruth Myers (Otago Polytechnic)*; Dave Guruge (Otago Polytechnic); Martin Andrew (Otago Polytechnic); Alexa Forbes (Otago Polytechnic); Glenys Forsyth (Otago Polytechnic); Steve Henry (Otago Polytechnic); Rachel McNamara (Otago Polytechnic)

In professional practice education, it has long been recognised that organisations must adapt through periods of disruption while remaining true to their ethos. But when change is profound, there is still no clear method to sustain responsiveness without losing the lived experiences that give such work its meaning. Existing accounts of educational change tend to privilege managerial structures or formal theory, rarely engaging with the authenticity of insider reflection. In this paper we use creative story transformation, while exploring diegetic referencing—an approach that embeds theory within narrative rather than citing it explicitly. As a common lived experience for the authors, we explore a recent period of upheaval. We present a series of insider "nuggets" retold as fables, diaries, parodies, and allegories, in which theoretical frames are present but not foregrounded, revealing new ways of negotiating the gap between theory and practice, and providing contextual distance. We expect this approach to expand methodological possibilities for professional practice research, in particular critically-engaged autoethnography, and collective modes of reflective processes, offering new ways to sustain authentic voice while engaging critically with theory in times of change.

Authors
Dr Samuel Mann (Professor, CapableNZ, Otago Polytechnic) is a geographer and computer scientist whose focus is making a positive difference through professional practice. He developed the role of the sustainable practitioner, the Sustainable Lens, and the Transformation Mindset. He led the development of the Doctor of Professional Practice degree at Otago Polytechnic. When not working, he is probably swimming in open water. https://orcid.org/0000-0002-1814-5684

Dr Ruth Myers is a facilitator at CapableNZ, and an artist living by a beautiful wild beach on Otago Peninsula. Ruth's research interests include performativity, body, technologies, place, sustainability, care, ethics, play, practice based/led research, professional practice and autoethnography.
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Paper ID: 135

Research Community of Practice meeting: Applied Business research (panel discussion)

Indrapriya Kularatne (Otago Polytechnic Auckland International Campus)*; Pii-Tuulia Nikula (Eastern Institute of Technology); Neeru Choudhary (Open Polytechnic)

This session will convene the established Applied Business Research Community of Practice, which connects staff researchers across the ITP sector in the business field. The group facilitates monthly online meetings focused on sharing ongoing research, insights, and opportunities for collaboration. This meeting will explore the significance of applied business research for developing new ideas and partnerships, highlighting current sector-wide projects and their implications for business practice and research development. We aim to foster knowledge exchange among School of Business researchers from multiple ITP institutions, helping to identify new directions for collaborative inquiry. The meeting will be conducted as an interactive discussion forum. Everyone interested in business research is welcome to participate.

Chair
Dr Indrapriya Kularatne is a Principal Lecturer and Postgraduate Programme manager at Otago Polytechnic Auckland International Campus and Future Skills Academy, New Zealand. He obtained his PhD from the University of Auckland; Master of Management from Massey University; and Master of Science from the University of Sri Jayawardenepura, Sri Lanka. His research focuses on sustainability, employability skills, project management, and AI applications in management and corporate settings.

Paper ID: 140 (Research Poster)

What makes a wellness and relaxation massage experience effective?

Victoria Morgan (Southern Institute of Technology)*; Donna Smith (Southern Institute of Technology); Jo Smith (Southern Institute of Technology)

Background: Consumer demand for massage therapy is high, with massage therapists representing the largest workforce within the Complementary and Alternative Medicine modalities globally. The Southern Institute of Technology delivers New Zealand Diploma in Wellness and Relaxation Massage (Level 5) in Year 1 of the Bachelor of Therapeutic and Sports Massage. Students learn to provide relaxation and wellness massage in a 'real world' client centric setting. This research, undertaken by SIT massage therapy educators to guide student learning, aimed to describe therapists' perspectives on key factors of effectiveness in the wellness and relaxation massage experience.

Method: Eligible participants, who were qualified massage therapists currently focused on providing wellness and relaxation massage to clients in a clinical setting, were invited to participate in semi-structured interviews. Inductive thematic analysis was used to identify common and uncommon views, values, approaches and experiences.

Results: The presentation will give an indication of initial results. However, some results suggest an effective wellness and relaxation massage is based upon the massage therapist's ability to provide a comfortable, safe and welcoming environment. Additionally, client centred communication, connection, along with the skill to personalise the massage experience all contributed to an effective massage therapy experience.

Authors

Jo Smith, Donna Smith, and Victoria Morgan are Massage Therapy educators at the Southern Institute of Technology. Their focus is on student centered education and linking real world experience back into the classroom. Clinical education is a key component of a student's learning and is deeply embedded into the Bachelor of Therapeutic and Sports Massage Degree. Their research will continue to inform teaching and learning across the programme.

Paper ID: 142

Longitudinal study on the perceived importance and interest of the IEA Graduate Attributes in engineering education

Hilary Lawrence (Otago Polytechnic)*; Adam Liberatore (Otago Polytechnic); Joelle Peters (Otago Polytechnic); Matthew Slattery-Holmes (Otago Polytechnic); Hana Cadzow (Otago Polytechnic); Brian Freeman (Otago Polytechnic); Ian Chesterman (Ara Institute of Canterbury); Lindsey Alton (Ara Institute of Canterbury); Carlo Gabriel (Southern Institute of Technology)

Vocational engineering ākonga (students) in New Zealand must meet 11 graduate attributes as part of the programme's accreditation under the International Engineering Alliance (IEA).

The goal of this longitudinal study is to use annual surveys, delivered at three Polytechnics in Te Waipounamu, to identify which attributes ākonga consider important, and which they are interested to learn about. The study is intended to identify potential gaps between educational outcomes and industry requirements in order to inform teaching practices and to better prepare graduates for the workplace. Ākonga will take the survey during each year of study, and into their early careers, so that we can map the progression of their attitudes toward the graduate attributes during this period. This is the second year of this study, so the scope of the longitudinal aspect is still under development.

The short survey has mixed question types and asks participants to rank IEA graduate attributes into categories according to their perception and importance with justification for their answers. Data analysis includes a thematic analysis of qualitative data. The themes identified in the current year's survey provide useful data for analysis and will also inform future survey design. A secondary aim is to explore the impacts of selected demographic profiles on perceptions of the graduate attributes.

Results from 2024's pilot research showed that most first-year ākonga consider the IEA graduate attributes with explicit technical content most important. This supported the previous observations by the authors that motivated the pilot study. The 2025 results also showed 'Engineering Knowledge' and 'Problem Analysis' were ranked highest in both interest and importance. However, thematic analysis of subsequent long answer questions indicated that about 25% of respondents specifically acknowledged the importance of all graduate attributes, with many other ākonga stating that certain attributes will be important later in their careers, such as project management and ethics.

Future goals include expanding the scope to include re-surveying graduating ākonga and early career engineers, as well as surveying employers to investigate how well perception of importance of graduate attributes aligns with industry expectations.
There is potential for the longitudinal study to inform not only teaching practice, but also curriculum changes with the process and outcomes of the study being flagged as "of

interest” to the national qualification governing body (VEENZ). All of this will enable IEA graduate attributes to be more effectively integrated into courses.

Keywords: graduate attributes, ākonga (student) perceptions, longitudinal study, thematic analysis

Author

Hilary Lawrence is a Senior Lecturer in Engineering Technologies at the College of Engineering, Construction and Living Sciences at Otago Polytechnic.

Paper ID: 145

Matihiko Minds: Mentoring indigenous youth to think one step ahead of AI

Noor Alani (Eastern Institute of Technology)*; Sally Rye (Eastern Institute of Technology)*; Charlizza Matehe (Toi Matarua); Sarah Pihema (Toi Matarua); Paul Watson (Toi Matarua)

Background: Rangatahi Māori (youth aged 15–19 in Te Matau-a-Māui, Hawke's Bay) are already engaging with artificial intelligence (AI) tools to ask about whakapapa (genealogies), pūrākau (stories), kōrero tawhito (histories), and tuakiri (identity). These systems are increasingly perceived as spaces of mentorship and guidance. This creates both opportunity and risk where AI may support cultural learning and belonging, but it may also distort or misrepresent Māori knowledge. Most AI systems are trained on generic data and values that do not reflect Māori frameworks of care, reciprocity, and safety, and there is currently no validated method to assess whether AI guidance is culturally safe for rangatahi.

Objective: To develop and validate Matihiko (Digital) Minds, a tikanga-aligned evaluation framework for assessing the cultural safety, relevance, and actionability of AI-generated mentorship-style guidance for rangatahi Māori.

Methods: We designed simulated mentorship scenarios grounded in tikanga Māori principles and used them to generate AI guidance tailored to a specific young person in a specific place. AI outputs were evaluated using automated cultural safety scoring for tikanga alignment, place-based relevance, privacy, actionability, and appropriate uncertainty.

Results: In an initial controlled prototype using multiple AI-generated mentoring responses to a realistic youth scenario, all responses directed the young person to seek confirmation from trusted cultural holders rather than relying solely on AI. Most responses also referenced local sources of support. The next step in this work is to further investigate how iterative review through a Delphi process with pou tikanga (cultural experts) and AI researchers can build consensus on whether the response upholds or undermines Indigenous values.

Conclusion: Matihiko Minds offers an evidence-based pathway to audit AI mentorship against tikanga Māori, supporting the development of culturally responsive AI for rangatahi Māori. The framework also establishes a foundation for teaching rangatahi to think critically and 'one step ahead of AI,' positioning them not as passive recipients of AI answers but as emerging leaders in their communities.

Ethics approval for this research has been granted by the EIT Research Ethics Committee (Ref: LR25180925).

Keywords: ChatGPT, indigenous youth, generative AI, AI, Co-Pilot, Gemini, Matihiko Minds, ako, LLM, Māori, Aotearoa-New Zealand

Authors

Dr Noor Alani's expertise spans various domains of AI to improve public safety.

Dr Sally Rye (Ngāti Kahungunu, Ngāti Porou, Te Arawa) is Head of Research at Eastern Institute of Technology (EIT) and founder of Rongo ā Puku Consultants. Born in Maraenui, Napier, she specialises in the gut-brain axis, the endocrine system, and Indigenous approaches to wellbeing. Sally uses neuro semantics and pūrākau to support whānau understanding of their tinana, and sharing mātauranga.

Paper ID: 149

Emotional intelligence embraces imposter phenomenon

Sherie Bell (Otago Polytechnic)*; Judith McFarland-Hill (Otago Polytechnic)

Sherie and Judith are both students at Capable New Zealand, Otago Polytechnic, completing research inquiries for the Master of Professional Practice. Sherie is researching the impact of imposter phenomenon at Otago Polytechnic and identifying support opportunities from an organisational perspective (ID paper #33). Judith is researching how aeronautical engineering tutors manage their emotions at work (ID Paper #92). This interactive session showcases the alignment and crossover of their separate research and they invite the audience to anonymously participate using Mentimeter (https://www.mentimeter.com/).

Both Sherie and Judith are completing their research inquiries utilising a qualitative research approach with an autoethnographical perspective. They have both drawn on reflective, thematic analysis to review the evidence and formulate findings from one-to-one interviews with participants.

This combined presentation seeks to explore the experiences of imposter phenomenon in tertiary education. This presentation is split into three sections:

1. Emotional intelligence meets the imposter: defining and understanding emotional intelligence and imposter phenomenon, key points and overlaps
2. The audience is invited to anonymously share their experiences with emotional intelligence and imposter phenomenon. This interactive part of the presentation will also explore if there are techniques that help the audience cope when they feel like imposters.
3. The big reveal: we share key takeaways and high-level findings from our research and see how these align with experiences from the audience.

Authors

Sherie Bell is an experienced leader with over a decade of experience in the tertiary sector. Sherie is currently Project Lead at Otago Polytechnic where she continues to drive innovation and excellence.

Judith McFarland-Hill spent 30 years in aeronautical business and marketing development. Her research aims to bridge the gap between academia and industry, Judith brings important insights to the study of aeronautical engineering tutors whose wellbeing impacts confidence in the future of tertiary training.

Paper ID: 155

Please see my family: How do LGBTIQ+ parents navigate and resist (het-cis-bio-) normativities within family-related services in Aotearoa New Zealand?

***Suzanne Miller (Otago Polytechnic)*; George Parker (Te Herenga Waka | Victoria University of Wellington); Clive Aspin (Te Herenga Waka | Victoria University of Wellington). Paper presented by Scout Barbour-Evans*.**

Background: LGBTIQ+ parents are rendered invisible within many institutional and societal norms of doing family. The experience of exclusion within family-focused social services is a minority stressor that is disruptive to parenting identity and family flourishing and can underpin inequities. To diversify understandings of what constitutes a family and amplify how LGBTIQ+ parents navigate social exclusion/inclusion at the intersections of indigeneity, race, socio-economic status, and ability we must take the lead from service users. LGBTIQ+ parents are best placed to articulate their needs and visions for what constitutes affirming service provision and what best supports their family wellbeing.

Objectives: To describe the constitution, diversity and intersectional experiences of LGBTIQ+ parented families in Aotearoa.

Methods: A nationwide anonymous online survey invited LGBTIQ+ parents to self-describe their family formations and provide examples of engagement with family-related services that were both affirming and non-affirming of them as LGBTQ+ parents.

Results: Preliminary data confirms that there is wide diversity in family constitutions within LGBTIQ+ parented families and that LGBTIQ+ parents experience both inclusion and exclusion within family-related services. This presentation offers solutions and guidance for organisations and services to promote family flourishing, identifying both systems-based and interpersonal factors that improve accessibility and equity for LGBTIQ+ parented families.

Conclusions: Family wellbeing is enhanced when services anticipate, welcome and provide affirming environments and support for LGBTIQ+ parented families. The practical guidance for services made possible by this research can reduce inequities for LGBTIQ+ parents.

Ethics and conflicts of interest: Ethics approval from Victoria University of Wellington Human Ethics Committee (HE040291). Funded by Royal Society of New Zealand Te Apārangi Marsden Fund (23-VUW-034).

Author

Associate Professor Suzanne Miller is an Associate Professor and Postgraduate Programmes Leader in the School of Midwifery at Otago Polytechnic, and is based in Wellington, Aotearoa. Suzanne has been educating pre- and post-registration midwives since 2010. She was a Co-Investigator on the Trans Pregnancy Care Project, and is now

a co-investigator on a three-year Royal Society Marsden Fund project exploring Rainbow parents' experiences within child-focused social services.

Scout Barbour-Evans (Ngāti Kahungunu ki te Wairoa) is a researcher, academic and policy nerd from Ōtepoti Dunedin. They began their own queer parenting journey as a trans single parent by choice while still completing their undergrad at Otago Polytechnic and have a great interest in learning more about the community they have become a part of, and the things we can all do in our each of our professions to make life a little more inclusive and kinder. They're working on 'Inclusion Through Difference' as a Research Assistant.

Paper ID: 156

You wash, I'll dry: An exploration of AI for course building and creative work

Traci Meek-Reid (Southern Institute of Technology)

“I want AI to do my laundry and dishes so that I can do art and writing, not for AI to do my art and writing so that I can do my laundry and dishes.” Author and videogame enthusiast Joanna Maciewska captures the impetus of this autoethnographical research: how can practitioners and educators alike use new artificial intelligence tools and pipelines to take on the tedious "dish washing" in Screen Arts to support human-centred creative expression?

Two contexts framed this inquiry. First, I had limited time to design a new paper. Second, I tested whether AI could tackle repetitive hurdles in animation.

Using generative AI as a brainstorming partner and research assistant, I defined the scope of a Worldbuilding paper, drafted lessons plans, and created assessment rubrics, and tackled editing and image refinement for stop motion—always reviewed and reshaped through my judgment. The results of this practice-based research showed that AI accelerated course development and relieved production bottlenecks. Yet its role is clear: to support, not replace, the joyful work of teaching and making in the Screen Arts.

Author
Traci Meek-Reid is a lecturer in Screen Arts at the Southern Institute of Technology. Originally from Alaska, she worked in theatre costume crafts and later in mascot and prop design for New Zealand television. She holds an MFA in Dramatic Art from University of Connecticut. Her creative practice includes stop motion and digital animation, with projects supported by NZ On Air and Creative NZ and a music video for Kath Bee that appeared on TVNZ 2.

Paper ID: 158

Creatively delivering HyFlex: A case study from Southern Institute of Technology, Aotearoa New Zealand

Traci Meek-Reid (Southern Institute of Technology)*; Rachel Mann (Southern Institute of Technology); Doug Heath (Southern Institute of Technology)

At the Southern Institute of Technology in Invercargill, three educators set out to explore how Hybrid Flexible (HyFlex) education—following Brian Beatty's framework, where learners choose to attend in person, join live online, or study asynchronously—could extend access to creative disciplines such as animation, games, film, and concept art. HyFlex was adopted to address regional barriers and preserve collaboration across both digital and physical studio workflows.

Using collaborative autoethnography, Rachel Mann, Traci Meek-Reid, and Doug Heath documented and analysed their iterative experiences as HyFlex was designed, trialled, and refined across courses. Mann piloted the model in a first-year video-game paper; Meek-Reid adapted it for digital and hands-on subjects, connecting long-distance with students; Heath further investigated the model's transferability by applying Meek-Reid's Research framework with Screen Arts students and exploring its potential extension into Audio Production.

Evaluation drew on reflective analysis and course analytics to identify indicators of flexibility, resource reusability, and sustainable workload. Rather than a universal solution, HyFlex emerges here as an evolving pedagogical practice—requiring constant negotiation between technology, teaching, and creative process.

Authors
Rachel Mann, Traci Meek-Reid, and Doug Heath are educators at the Southern Institute of Technology, New Zealand, with expertise in animation, screen arts, and audio production. They have developed and implemented Hybrid Flexible (HyFlex) learning models, connecting students across distance while maintaining creative engagement. Their combined experience in curriculum design, practical production, and innovative teaching makes them leaders in applying HyFlex approaches in the creative industries.

Paper ID: 162

Blind but fair? Exploring the psychology and practice of anonymous grading

Lindsey Alton (Ara Institute of Canterbury)*; Ian Chesterman (Ara Institute of Canterbury)*

The aim of this research is to explore tutor perceptions of blind marking and the techniques for implementing blind marking in the polytechnic sector. Previous research around blind marking has predominantly been done by secondary education or the university sector, where lecturers often don't mark student work. The research therefore has tended to focus around whether removing names from scripts reduces instances of gender or racial bias. The results from this are mixed, with some older research tending to find that blind marking does reduce bias but more recent research showing limited or no effect. The polytechnic sector is different as tutors usually mark their own students' work and know students well, which could lead to conscious or unconscious bias either towards or against certain students.

One area where research appears to be lacking is the effect of implementing blind marking upon those doing the marking. Some opinion pieces were found that generally agreed with the researchers' perceptions but nothing systematic. This will be an interactive presentation where participants will be asked to review an invented assignment submission and to grade the work. The researchers will also share their insights into implementing blind marking at Ara and discuss the literature around the subject. The researchers implemented blind marking in the courses they teach by asking students to only include their student ID on submitted assignments and tests. Marked work was then mapped back to student names and data was collected through critically reflective discussions between the researchers. The researchers have perceived that blind marking is less stressful, and have sometimes been surprised by student performance, indicating that unconscious bias may have existed previously.

The researchers aim to obtain more perceptions from other tutors based on the interactive presentation and to encourage other tutors to try blind marking for their own courses. No ethics approval is required as all participants in the discussions are authors.

Authors

Lindsey Alton is a mechanical engineering lecturer at Ara. Originally from the UK, she came to New Zealand to do a PhD in cycling aerodynamics where she worked with BikeNZ to help improve athlete performance for the London 2012 Olympics. Her research interests are sports engineering, aerodynamics and engineering education. She enjoys running and mountain biking in the Port Hills in Christchurch, and spending weekends away tramping when time allows.

Ian Chesterman is a mechanical engineering lecturer at Ara. Originally from the UK, where he worked as a Naval Architect, he came to New Zealand for two years and loved it so much he stayed. His research interests are engineering education, robotics, and aerodynamics. He enjoys biking in the Port Hills in Christchurch, and time spent in the outdoors with his family.

Paper ID: 169

Different South Island institutes in New Zealand: Comparing engineering student perceptions of graduate attributes

Adam Liberatore (Otago Polytechnic)*; Lindsey Alton (Ara Institute of Canterbury); Ian Chesterman (Ara Institute of Canterbury); Carlo Gabriel (Southern Institute of Technology); Hilary Lawrence (Otago Polytechnic); Joelle Peters (Otago Polytechnic); Matthew Slattery-Holmes (Otago Polytechnic); Hana Cadzow (Otago Polytechnic); Brian Freeman (Otago Polytechnic)

In New Zealand, vocational engineering programmes require ākonga (students) to demonstrate 11 graduate attributes as part of accreditation under the International Engineering Alliance (IEA). This study seeks to explore whether different institutes, and the ākonga entering them, hold varying perceptions of these attributes. Te Waipounamu (the South Island of New Zealand) hosts several engineering education providers, each situated in cities with distinct population sizes and industry profiles. The aim of this research is to investigate potential differences in how ākonga perceive the IEA graduate attributes across institutions.

A short survey was administered across three institutions and across all three years of study in Te Waipounamu. Participants ranked the IEA graduate attributes according to perceived importance and personal interest, providing written justifications for their choices. Prior to completing the survey, ākonga received a standardised presentation explaining the graduate attributes.

This survey forms part of a larger, ongoing research project. Surveys will be repeated annually throughout the programme and again when the cohort transitions into the workplace. Data from the current phase will highlight whether and how ākonga perceptions of the IEA attributes differ between institutions as well as understand any weakness in the research and survey approach. Insights gained will help focus the longer-term research project. The overall goal will support the development of targeted resources to better embed graduate attributes into teaching and learning.

Authors

A group of engineering educators from OP, SIT and ARA learning about students' perceptions and interest of graduate attributes.

Paper ID: 173

Making feedback matter: Exploring student engagement with summative assessment feedback in the Bachelor of Applied Management programme

Joe Taylor (Otago Polytechnic)*; Phil Osborne (Otago Polytechnic)

Feedback is widely recognised as a critical component of effective learning, yet its impact is contingent on how students engage with it. This research proposes to investigate how learners in the Bachelor of Applied Management (BAM) programme at Otago Polytechnic interact with summative assessment feedback. While summative feedback is intended to inform students of their performance and guide future improvement, there is limited understanding of whether, and how, students use this feedback to enhance their learning.

Producing summative assessment feedback is a time-intensive process for educators, requiring detailed engagement with each student's work to provide meaningful, personalised commentary. This includes not only evaluating the content against marking criteria but also articulating strengths, identifying areas for improvement, and suggesting strategies for future development. Depending on the complexity of the assessment and the size of the cohort, this process can represent a significant investment of academic time and energy. Given this commitment, it is essential to understand whether students are engaging with the feedback in ways that justify the effort and contribute to their learning progression.

The study seeks to explore students' perceptions, interpretations, and applications of summative feedback. Key questions include: Do students read and reflect on the feedback they receive? Do they find it comprehensible and actionable? And to what extent does it influence their approach to subsequent assessments? To address these questions, a qualitative methodology involving semi-structured interviews with a simple random sample of 10–20 BAM students, across both Leadership/Management and Accounting majors is proposed. A semi-structured approach allows for both consistency in data collection and the flexibility to capture rich, authentic student narratives. Thematic analysis will be used to identify patterns in how feedback is received, understood, and utilised. By illuminating the student experience of summative feedback, this research aims to inform more effective feedback practices and contribute to the enhancement of teaching and learning strategies within applied management education.

Author
Joe Taylor teaches within the Bachelor of Applied Management programme at Otago Polytechnic. He is an experienced educator with a strong foundation in Business and related disciplines, committed to enhancing student outcomes through evidence-based teaching practices. Joe's research interests focus on improving learner engagement, curriculum design, and applied pedagogical innovation.

Paper ID: 176

AI-assisted gamification in nursing education: An autoethnographic exploration of escape rooms and board games in pharmacology teaching

Sara Vermeulen (Ara Institute of Canterbury)

Gamification is increasingly recognised as a powerful pedagogical strategy in health education, promoting engagement, collaboration, and deeper learning. In undergraduate nursing pharmacology, where content can be dense, gamified tools offer a way to make learning active, memorable, and ākonga focused. This project explores how artificial intelligence (AI) can support the design of gamified learning experiences and how gamification of pharmacology education can enhance engagement with content. The study uses autoethnographic reflection, capturing the experience of a nurse lecturer navigating the use of AI and game design in classroom practice. It asks: 'How can AI support the design of gamified learning tools, and how does gamification enhance engagement and formative learning in nursing pharmacology education?' Using an autoethnographic approach, the researcher documented the design and implementation of three gamified learning tools: a pharmacology-themed escape room, a collaborative board game, and a Jeopardy-style quiz. An AI tool, Copilot, was used to assist in creating game ideas, generating rules and assisting with refining puzzles and questions. The games were delivered using physical materials and digital tools (e.g., lock and key, board games, QR codes, and buzzers).

Data sources included:

- The lecturer's reflective journals
- Design artefacts (e.g., AI outputs, game drafts)

The reflective practice cycle guided the process: ideation, prototyping, classroom implementation, and iterative refinement. No ākonga reflections or personal data were collected.

The games were piloted with Year 3 nursing ākonga, who responded with high energy, enthusiasm, and competitive spirit. AI was found to enable enhanced creativity, speeding up prototyping, and supporting inclusive design. Challenges included technical hiccups (e.g. QR code scanning, buzzer malfunctions) and group dynamics, which were addressed through iterative adjustments. The study highlights how educators can use AI to increase access to engaging learning tools and lead the creation of responsive, student-centered experiences.

Author
Sara Vermeulen is a nursing lecturer at Ara and teaches on the Bachelor of Nursing programmes with a strong focus on pharmacology. Prior to Ara, Sara worked as a Nurse Specialist in Timaru, leading portfolios in acute pain management, intravenous therapy, and wound care. She holds a Master of Nursing and a certificate in adult education.

Paper ID: 177

Weaving Te Tiriti and Te Reo me ngā Tikanga into the Bachelor of Sustainability and Outdoor Education (BSOE). He raranga i Te Tiriti me Te Reo me ngā Tikanga ki te BSOE.

Rachael Pelvin (Ara Institute of Canterbury); Lena Mkwara (Ara Institute of Canterbury)*; Te Ao Marama Apiata (Ara Institute of Canterbury); Allen Hill (Ara Institute of Canterbury)

In 2019 the academic team responsible for the Bachelor of Sustainability and Outdoor Education (BSOE) at Ara Institute of Canterbury embarked on a redocumentation project to revise and reapprove the BSOE with NZQA. This redocumentation process continued the impetus from previous programme development in the team to position Te Tiriti o Waitangi, kaupapa Māori, and mātauranga Māori more recognisably in the programme. In practical and pedagogical terms, the weaving of Te Ao Māori, kaupapa, and mātauranga Māori into the BSOE degree have been framed as Te Tiriti o Waitangi and Te Reo me ngā Tikanga. In focusing on teaching and learning related to Te Tiriti o Waitangi and Te Reo me ngā Tikanga, the position and importance of Te Ao Māori as a unique identifying factor for this degree in the landscape of Aotearoa and Te Waipounamu have developed and deepened. This has supported ākonga and kaiako to better understand the implication for their current and future practice.

This research aims to share a methodological framework designed to explore ākonga and kaiako experiences within a culturally responsive BSOE education programme. It presents a sequential mixed methods approach, detailing its implementation and the rationale for its selection. The framework includes a convergent on-line questionnaire that blends quantitative and qualitative questions, followed by focus group interviews to gather ākonga perspectives. A third phase employs Collaborative Autoethnographic (CAE) methodology, enabling kaiako to collectively reflect on their teaching experiences. Grounded in a pragmatic research philosophy, this design offers a model that can be applied to similar educational research contexts.

This research contributes a methodological approach that responds to the need for culturally responsive research designs that honour both ākonga and kaiako voices. The framework offers practical guidance for educators and researchers seeking to embed Te Tiriti o Waitangi and Te Ao Māori meaningfully into programme design, evaluation, and pedagogy.

Author
Lena Mkwara is a Senior Lecturer and Co-Programme Leader for the Master of Sustainable Practice at Ara in Christchurch, New Zealand. Her PhD research focused on declining freshwater quality and its impacts on people's wellbeing. Lena’s research and teaching interests encompass the nexus between humans and the environment, and sustainability with a keen interest on indigenous perspectives, and sustainability policy, monitoring, and reporting.

Paper ID: 179

Gamified Building Information Management (BIM) education

Leana Scheffer (Otago Polytechnic)*

Learning how to use technical software requires balancing programme knowledge with individual proficiencies. Current pedagogic models for software include self-directed online tutorials and face-to-face courses. Online courses offer comprehensive coverage but lack place-specific industry relevance. Face-to-face courses provide efficient and targeted learning but are highly specific to the lecturer's process so learning opportunities for self-pacing and exploration are limited. This study explores how gamification of self-paced, face-to-face learning might accommodate different learning approaches in BIM (Building Information Management) software education.

An undergraduate ArchiCAD (architectural computer-aided drawing programme) elective developed over three years used assessment combining gamified learning and project-based learning. The gamified component used an assessment "map" containing all relevant ArchiCAD tools and features as tickable boxes, serving as both learning guide and progress tracker. Ākonga gained new knowledge through this map, then applied knowledge through an example project recreating an existing drawing set. Additional gamification elements included scaffolded challenges, visible and hidden achievements, and semester awards.

Using thematic analysis of gamified assessment sheets and awards data from the 2025 cohort, this research examines engagement and completion patterns. Ākonga appeared to adopt two approaches: some followed the sequential box order while others followed the project sequence to recreate an existing drawing set. Both pathways seemed to work equally well.

Observations suggest high attendance and engagement despite having tools for independent work, possibly indicating the gamified consultation model and social learning environment created value beyond assessment requirements. This may offer insights for technical educators seeking to balance comprehensive coverage with personalised learning while accommodating diverse learning preferences.

Author

Leana Scheffer is a Senior Lecturer and Postgraduate Programme Coordinator at OP's School of Architecture. Her research explores metacognition in pedagogy, research methodology, phenomenology, and place.

Paper ID: 181

Collaborative auto-ethnography, time, and the practice of sustainability

Allen Hill (Ara Institute of Canterbury)*; Adam Brasell (Ara Institute of Canterbury); Georgie Archibald (Ara Institute of Canterbury); Lena Mkwara (Ara Institute of Canterbury); Reimana Tutengaehe (Te Wananga o Aotearoa)

At OPSITARA 2024, our group used a collaborative conversation to present some introductory thoughts related to our research project investigating perceptions of and relationships between time, sustainability, and wellbeing. In that forum we initiated a conversation based on our diverse cultural perspectives and positionality, that posed future research curiosities related to time and the practice of sustainability. For this project we conceptualise the practice of sustainability as intentional acts of caring for the wellbeing of self, others, and our planet. Whilst our starting point was our own narratives, the conversation was/is informed by a body of scholarship that suggests dominant time-related societal structures and late modernity, i.e. the 'busy-ness' of modern life, have resulted in 'time squeeze' and therefore growing (un)sustainability and wellbeing issues.

Twelve months on, our research group picks up the conversation as it has progressed to the next stage. Having achieved formal ethics approval for our collaborative auto-ethnography research approach, this presentation highlights initial thematic findings from our individual narratives. In doing so, the presentation illuminates the shared tensions and contradictions that emerge as we each seek to navigate time squeeze and challenges associated with the practice of sustainability and wellbeing.

Notably, in our abstract for OPSITARA 2024 we talked about "disrupting time-squeeze and pointing to new ways of practicing sustainability." These ambitions, perhaps akin to the United Nations Agenda 2030 and Sustainable Development Goals, were lofty, aspirational, and perhaps unachievable. Negotiating competing internal and external pressures on our time often means that prioritising time for the practice of sustainability is challenging. Amid such challenges, we find solidarity in shared experience whilst celebrating opportunities to learn from each other as we explore our diverse culturally rich narratives.

Author

Dr Allen Hill is Portfolio Manager Science, Sustainability, and ECE at Ara Institute of Canterbury. Prior to this role, Allen led the interdisciplinary Master of Sustainable Practice programme at Ara. Allen has been involved with sustainability and educational leadership in the tertiary sector for over 10 years. In his leadership Allen works with academics, teachers, and students to realise the transformative power of education to bring about sustainable, just, and regenerative communities.

Paper ID: 187

Cultivating seaweed in an aquaculture farm: The value of staff-student publications

Anna Palliser (Southern Institute of Technology)*; Georgia Wilson (Southern Institute of Technology)

Over the years there have been a significant number of papers published in *SITJAR*, the *SIT Journal of Applied Research*, which are the result of degree and graduate diploma research projects in the environmental management department. This presentation discusses one such paper that was recently published, both in terms of the value of this particular research project and the value of working with students on publications.

The research aim was to investigate if the seaweed *Ulva lactuca* could be cultivated as a potential commercial product alongside the salmon farm areas of Sanford's Big Glory Bay salmon farm on Stewart Island, Rakiura. If successful, not only could this be a valuable addition to Sanford's products, it would also contribute to removing excess nitrogen in the water resulting from salmon production.

Two methods of cultivation were trialed at the farm over an eight-week period: the vertical method, where growing samples of the algae were tied to a rope, and the tube net method, where growing samples were placed in a net which was then tied to a rope. The ropes were suspended in the water. The results showed that only the vertical method was successful. The study concluded that Ulva lactuca could be grown in waters down to 12.4°C, thus only over summer months on Rakiura, and that the best growth was between 1.5 and 2.5 metres of depth as the seaweed died off both above and below this depth range.

The depth range result was an interesting contribution to aquaculture research according to a peer reviewer from the aquaculture industry, thus one that would not have been revealed without publication. This shows that even degree-level research can make contributions. Also working on a publication gives valuable experience to students of the process and requirements, as well as a valuable addition to their CV. Of course, it also provides supervisors with research outputs.

Author

Dr Anna Palliser has taught on the degree and graduate diploma in environmental management programmes at SIT since 2010. She is a Fulbright Scholar and has won an Excellence in Research award at SIT.

Paper ID: 195

Developing a corporate governance index for publicly listed companies in New Zealand

Mark Wilson (Nelson Marlborough Institute of Technology)*; Michelle Liu (Nelson Marlborough Institute of Technology)

This study aims to develop a robust and contextually appropriate corporate governance index for publicly listed companies in Aotearoa New Zealand. While many countries use such indices to benchmark governance practices, New Zealand has not had a widely adopted, up-to-date index for several years. Given the increasing public, regulatory, and investor interest in board composition, diversity, and governance transparency, this project addresses a clear gap in the current corporate accountability landscape. The central research question guiding the study is: How can a context-specific and practically useful corporate governance index be developed to assess the governance practices of New Zealand-listed companies?

The research is grounded in the corporate governance principles recommended by the New Zealand Stock Exchange (NZX) and also draws on international literature to inform the design of a multi-criteria index that balances standardisation with relevance to the New Zealand corporate environment. The index was then applied to a range of New Zealand-listed companies to test clarity, consistency, and usefulness. We also explored the potential of artificial intelligence tools to automate data extraction from company reports, with promising early results.

Our findings highlight the importance of balancing structure and flexibility in index design. While numerical scores can indicate governance trends, they must be interpreted with care. This research contributes a new tool for benchmarking governance practices in New Zealand and supports investors, regulators, and stakeholders in making informed decisions.

Author
Mark Wilson is a tutor at the Nelson Marlborough Institute of Technology who teaches accounting, law and finance. His research interests include corporate governance, capital gains tax, and housing affordability.

Paper ID: 196

Home design for work-from-home families in New Zealand

Phillip Etherington (Ara Institute of Canterbury)*

The global pandemic transformed the worker-employee paradigm. In 2020 many employees found themselves working remotely in makeshift offices, squeezed into homes ill-designed for this purpose. The technology to engage in digital processes, data processing, collaboration, communication, and a wide array of other digitally based tasks were already commonplace. Home computers and wireless networks had been standard home electronics for at least 10 years. The digital technology is there, more or less, but in many cases the spaces people work in are insufficient to support the needs of the modern-day remote worker. Residential design must evolve to provide functional and dynamic spaces that facilitate remote working.

Design features discussed in this study integrate measures that ensure homes are more sustainable, energy-efficient and improve the wellbeing of work-from-home workers. This study analysed current residential design and asked remote workers how it could be improved to facilitate remote working. The primary research tool was an online questionnaire that attracted over 100 responses. Questions addressed the physical space, lighting, noise levels, privacy, heating and comfort, associated costs, productivity levels, and employer remuneration.

Results showed that most people preferred working from home but up to 25% were dissatisfied with the working conditions their current home offered, particularly those in smaller homes less than 100 sq.m. The study also found that up to 13% of respondents are thinking of renovating to make better workspaces. This study recommends designers integrate the interior comfort, lighting, and semi-private space standards outlined to better facilitate remote working.

Author
Phillip Etherington is a senior lecturer and programme leader at Ara Institute of Canterbury. He has taught on both the NZ Diploma in Construction and the Bachelor of Construction for the past six years, and for the previous eight years at Unitec. Phillip's career started as an architectural designer before moving into Building Departments and managing Building Departments in local government. Upon leaving the council he moved back into the academic world, completing a GDHE and M.Con. with a research specialty in Building Energy Performance.

Paper ID: 198

Designing and delivering the Master of Applied Science—coursework programme — asynchronously

Codi Ramsey (Otago Polytechnic)*; Phil Handcock (Otago Polytechnic)

In the context of increasingly diverse classrooms and evolving educational expectations, kaimahi | teachers are challenged to adopt flexible and innovative approaches that meet students' needs and foster active participation in learning. The primary purpose of this teaching practice initiative was to support master's degree ākonga studying while working/interning in high-stress/high-workload coaching environments. This specific approach was implemented to problem-solve for difficulties with class attendance, to make structured content relevant for all ākonga, and to challenge critical thinking beyond the practical/technical aspects of practice.

Methodologically, the initiative centres on reflective practice and project-based learning while linking to four main themes that are delivered throughout the course: The organisation (e.g. Highlanders and loyalty within sport), the industry (e.g. the aura of the strength and conditioning professional), the professional (e.g. the student as a coach acting professionally) and the client (e.g. dealing with athlete understanding, beliefs, and misinformation). Kaimahi experiences provide a first-hand perspective on the successes and drawbacks of delivering this content asynchronously.

Outcomes from this initiative revealed increased student engagement, greater participation, and evidence of deeper reflective thinking and paradigm shifts. Ākonga have responded positively to the asynchronous class design, however there are challenges such as limited face-to-face time and regular progress check-ins. The significance of this teaching practice lies in its demonstration of how flexibility and responsiveness to student needs and contexts can improve learning experiences.

The findings underscore the importance of ongoing professional dialogue and adaptability in teaching, offering practical insights for educators seeking to refine their practice. This initiative advocates for a culture of continuous improvement where shared experiences and reflective practice drive ākonga success and kaimahi professional growth.

Author
Codi Ramsey is a Principal Lecturer at Otago Polytechnic's Institute of Sport, Exercise and Health. She is the programme lead for the Master of Applied Science programme and has spent extensive time developing the programme to meet the unique needs of sport ākonga.

Paper ID: 199

Embedding Lean thinking in quantity surveying (QS) education through assessment for learning approaches in New Zealand tertiary institutions

Nilmini Thilakarathna (Ara Institute of Canterbury)*

Lean principles (LP) emphasise waste reduction and efficiency which is increasingly relevant in education. Similarly, Assessment for Learning (AfL) approaches ensure learning goals, provide actionable feedback, and create a safe environment for learning through summative and formative assessments. This study investigates how LP can be embedded into Quantity Surveying (QS) education in New Zealand, particularly with AI, making it essential for learners to engage in authentic tasks within formative assessments. Current practices often involve repetitive summative activities across subjects, while some critical tasks are missing, leading to unnecessary workload and stress in assessments.

This research aims to map AfL activities against subject learning outcomes in QS education to minimise the redundancy while enhancing authenticity. The study will be conducted in three phases: I) Developing a conceptual framework that aligns learning outcomes with formative and summative AfL activities while integrating LP; II) collecting survey data from QS students to capture initial perception of LP and AfL to validate the conceptual framework developed in phase I, and III) conducting semi-structured interviews with QS educators and industry professionals to explore summative and formative practices, perceptions and potential barriers to refine the framework.

Findings will support authentic learning environments, inform innovative lesson planning, and improve graduate work-readiness for the construction industry. Additionally, the study will explore manageable workload, wellbeing, autonomy, and experiencing eustress.

Keywords: Lean principles, assessment for learning, quantity surveying education

Author
Dr Nilmini Thilakarathna is a Senior Lecturer and Program Leader in Construction Management/Quantity Surveying at Ara Institute of Canterbury, New Zealand. With 25+ years of professional and academic experience, she holds a PhD from AUT and has strong academic qualifications and professional recognition. Her expertise includes Lean Construction, sustainable QS education, and curriculum development, with active engagement in industry and research.

Paper ID: 200

Completing the Bachelor of Applied Science 5-year review: Lessons learned in rewriting the programme document

Codi Ramsey (Otago Polytechnic)*; Kath Danaher (Otago Polytechnic)

Since 2018, the Bachelor of Applied Science (BAppSci) at the Institute of Sport, Exercise and Health (ISEH) has been delivered using a constructivism approach, with ākonga utilising past experiences and problem-based learning to inform areas of future learning. In 2023, the BAppSci began its 5-year review process. Consultations were completed with graduates, current ākonga and kaimahi, and industry partners. Combined with decreasing enrolment numbers, feedback from these groups revealed several issues. among which were a lack of depth in content delivery, over-emphasis on placement hours, and disconnect between courses. Positive feedback included: kaimahi knowledge and passion, placement opportunities, and hands-on learning. While the programme name remains the same, the delivery style and the learning philosophy were changed from strict constructivism to a multidisciplinary scientific approach that is underpinned by theories of empiricism, critical realism, and complex systems.

The newly packaged BAppSci is designed to suit the typical enrolled ākonga, who is a school-leaver with minimal life-experiences and an expectation of a traditional learning environment. Strategic navigation of several challenges was required to balance the feedback to improve the learner experience and manage difficult kaimahi dynamics and low departmental culture.

First-hand perspectives from the project lead highlight lessons in emphasising clear communication channels, and iterative feedback loops fostered transparency throughout the revision process. Addressing departmental culture required intentional actions to build collaboration and morale, while curricular redesign focused on scaffolding content to better suit novice learners without sacrificing core hands-on experiences. Resolving competing priorities—industry expectations versus academic depth—underscored the importance of flexible frameworks, continuous consultation, and evidence-based decision-making that can be applied to similar tertiary programme reviews.

Author

Codi Ramsey is a Principal Lecturer at Otago Polytechnic Institute of Sport, Exercise and Health. Leading the staff through a programme alteration and changes has been a challenging and rewarding process. It forced growth, acceptance and culture shifts among all staff. The work is far from done, but the future is bright for incoming applied science learners.

Paper ID: 202

Energy renovation of historic buildings in New Zealand

Rachel Paschoalin (Ara Institute of Canterbury)*

As global commitments to carbon reduction intensify, the energy renovation of historic buildings is increasingly recognised as a strategy to lower energy demand and greenhouse gas (GHG) emissions while preserving cultural and architectural values. Although many countries have developed retrofit policies and guidelines for heritage buildings, New Zealand has yet to establish a national framework addressing the social, cultural, environmental, and economic dimensions of heritage retrofits.

This research investigates whether New Zealand would benefit from adopting comparable guidelines, assessing implications from both policy and practice perspectives. An established European renovation methodology was applied to three hypothetical retrofit scenarios for heritage buildings in Wellington, supported by expert interviews. The study evaluates the applicability of international procedures within the New Zealand context, examining multiple criteria assessments, methodological recommendations, and risk analysis. It also identifies trade-offs across energy efficiency, financial cost, thermal comfort, carbon footprint, and heritage integrity.

Findings indicate that tailored retrofit guidelines could substantially contribute to New Zealand's 2050 GHG reduction targets while safeguarding historic building stock from demolition. Expert perspectives support the introduction of such guidance as good practice, while also highlighting barriers to implementation. The study concludes by proposing preliminary New Zealand-specific retrofit guidelines, offering a foundation for future policy and practice in the conservation of heritage housing.

Author
Rachel Paschoalin is a researcher, lecturer and heritage professional specialising in the holistic conservation and management of historic buildings, taking into consideration the balance between both technical building assessments and cultural values. She also holds a PhD in Architecture from Victoria University of Wellington. Her research focuses on holistic guidelines for renovating historic buildings towards less environmental impact, considering multiple criteria assessments.

Paper ID: 206

Cricket fast bowling technique risk factors for lumbar bone stress injuries

Darryl Hands (Southern Institute of Technology)*; Tyler Coventry-Searle (The University of Newcastle)

Biomechanical analyses of cricket fast bowlers have highlighted a general technical framework for the bowling action. This may have wide-ranging applications, including improving coaching practices to minimise the risk of debilitating lumbar bone stress injuries (LBSIs). Indeed, recent literature has confirmed bowling technique as the main factor determining the load experienced by the lumbar bone. Despite this progress, it has been argued research pertaining to technical risk factors has made little progress in informing coaching practices. Therefore, a review is warranted to assess technical risk factors for LBSIs.

Databases (Taylor & Francis, PubMed, Scopus, Web of Science, SportDiscus) were searched using terms related to cricket fast bowling, technique, biomechanical measures, and LBSIs. Using PRISMA, inclusion criteria stipulated peer-reviewed original fast bowling studies, with defined kinematic/kinetic assessment of the bowling action specifically associated with LBSIs. Shoulder counter-rotation research was excluded, having been previously discredited. Quality assessment was performed via a bespoke scale.

Current evidence suggests technical risk factors for LBSIs include excessive lumbopelvic lateral flexion and rotation, and increased lumbopelvic extension, likely a combination of all three. The likely causes of these findings are suggested to be misalignments into back-foot and front-foot contact, and possibly “stopping” at back-foot contact. Quality assessment determined that studies are limited by inadequate consideration of confounding factors and participant descriptions.

The isolation of components of the bowling action in studies limits the understanding of cause-and-effect relationships, which is the greatest limitation of literature to date. It is suggested that future research should consider the whole bowling action to provide clear and appropriate solutions that can be applied consistently. However, there appears to be strong evidence that misalignment of the lower limbs, likely a closed stride angle, is the cause of LBSIs, which should be viewed as essential knowledge for coaches and coach educators.

Author
Darryl Hands has a research interest in cricket fast bowling, with a focus on technique to both maximise performance and minimise the risk of lumbar bone stress injuries. As a qualified coach, Darryl places emphasis on the practical outcomes of research.

Paper ID: 211 (Research Poster)

An analysis of the fatty acid composition of ruminant milk cheeses in Aotearoa

Mary Fitzpatrick (Ara Institute of Canterbury)*

Ruminant milk cheeses are an important dietary source of bioactive fatty acids, including long-chain polyunsaturated fatty acids (LCPUFAs) and odd-chain saturated fatty acids such as pentadecanoic acid (C15:0), which may play a beneficial role in human health. C15 is associated with immune system function, cardiometabolic protection, and liver health, which has prompted discussion on the classification of C15 as an essential fatty acid. Nevertheless, C15 is not typically present in plant-based lipids since it is primarily synthesised by bacteria found in the rumen of ruminant animals.

The purpose of this study was to analyse a range of locally available ruminant milk cheeses (sheep, goat, buffalo, and dairy) for the presence of C15 as well as LCPUFAs. The cheeses were sourced from New Zealand producers and purchased in Christchurch from PIKO wholefoods. Sample preparation for GC analysis requires the conversion of all fatty acids to the more volatile fatty acid methyl esters (FAME). Direct methylation of fatty acids was carried out using fresh samples of each cheese. Analysis was completed using GC-FID with a 120m BPX-70 column, ID 0.25µm.

Preliminary findings indicate C15 content in goat, dairy, sheep, and buffalo cheese was 1.2%, 1.2% 1.4%, and 1.5% of total lipid content respectively. The slight variation between species may reflect differences in rumen microbiota or feed composition. However, the consistent detection of C15 across all ruminant cheeses sampled, and its absence in coconut-based vegan cheese, highlights ruminant dairy products as suitable dietary sources of this potentially essential fatty acid.

Author
Mary Fitzpatrick teaches in the Foundation and Applied Sciences at Ara Institute of Canterbury. She is fairly new to research and began investigating fatty acids in 2022 with a view to informing her teaching in the Nutrition area. She has made previous submissions to OPSITARA in 2022 and 2024 focusing on plant-based milk alternatives. In 2025, she is investigating the presence of pentadecanoic acid, C15:0, in ruminant milk cheese.

Paper ID: 212

The adoption and impact of digital procurement on the supply chain efficiency in the New Zealand construction industry

Rohan Dharmadasa (Otago Polytechnic Auckland International Campus); Jalthotage Nishika Jayasinghe (Otago Polytechnic Auckland International Campus)*; Priyanka Raina (Otago Polytechnic Auckland International Campus); Indrapriya Kularatne (Otago Polytechnic Auckland International Campus)

The New Zealand construction industry, characterised by its fragmented nature and reliance on traditional practices, lags significantly in adopting digital procurement despite global advancements. This contributes to persistent inefficiencies, including delays, cost overruns, and coordination challenges across the supply chain. Digital procurement encompasses tools such as e-procurement platforms, cloud-based sourcing, and smart contracts, hence presenting substantial opportunities to overcome these shortcomings and enhance supply chain performance. Supply chain in construction industry refers to the network of businesses, procedures, people and the materials that can be used to complete construction projects. A critical empirical research gap remains unexplored regarding its specific adoption and direct impact on supply chain efficiency within New Zealand's unique context. This research aims to explore the adoption of digital procurement practices and study their impact on supply chain efficiency in the New Zealand construction industry. To achieve this aim, four main objectives have been identified: 1) assess the current state of digital procurement adoption in New Zealand, 2) determine key barriers and enablers influencing its uptake, 3) evaluate its effects on supply chain efficiency, and 4) develop recommendations to leverage digital procurement for optimising supply chain efficiency. The study will adopt a qualitative research design. Data will be collected through semi-structured interviews with 10–15 key stakeholders, including procurement officers, project managers, and supply chain professionals from both public and private sectors, utilising snowball sampling. Thematic analysis will be used to analyse data to identify themes and sub-themes. It is anticipated that the findings will offer an empirical insight into how procurement technologies are understood, adopted, and operationalised within New Zealand's construction sector. The results are expected to guide procurement managers, contractors, and policymakers in shaping adoption strategies, bridging an empirical gap, and supporting supply chain efficiency through tailored approaches to digital uptake.

Author

Priyanka Raina is a Senior lecturer at Otago Polytechnic Auckland International Campus. She teaches courses related to Construction Management and Quantity Surveying including Construction Technology, Building Services, Programming, Environment, Law and Contracts, Procurement, Property Development and Investment. Her professional interest areas are teaching and research in the areas of Construction Education, Construction Law and Contracts, and Sustainable Construction.

Paper ID: 215 (Creative Practice Presentation)

Icehook

Chris Popham (Southern Institute of Technology)*

I aim to show what my year of work on my graphic novel titled *Icehook Isle* looked like and why I think it's important to our country's physical and digital media outputs that range from local stories, films, animations, and games. The purpose of the *Icehook Isle* graphic novel is to tell a story through a visual medium that can be easily understood at a glance, as communication is vital to education and understanding amongst all people. There is a range of learning styles, so providing a way for people to understand something through text as well as visuals is an excellent way to engage with an audience.

I will overview what the practice-based research of graphic novel production was like including behind-the-scenes thoughts and decision making done so this story was something people would want to read. I will speak to what it was like working with a collaborator, why I chose this individual as a collaborative artist, and how their design work aided in crafting the final look. I also aim to discuss how my opinions about this project changed after attending talks hosted at SIT from local funding bodies and guild reps as these industry insights were vital in shaping where I see *Icehook Isle* fitting into the local media landscape.

The significance of this research project is to also start exploring how the current system for New Zealand-based media could take a step towards a stronger pipeline to get visual stories on a global stage.

Author
Chris Popham is a tutor at Southern Institute of Technology. He teaches in the animation sector where illustration and storytelling are very important.

Paper ID: 217

Failing to feedback – In the first instance: Development of an escalation pathway for aged care mentors supporting Bachelor of Nursing students

Stacey Porter (Southern Institute of Technology)*

Failing to provide timely and constructive feedback is a recognised challenge in nursing education, particularly in Aged Residential Care (ARC) placements. Inconsistent feedback can delay identification of student learning needs and limit opportunities for early intervention. This study used a mixed-method approach to examine 2024 student progress notes and mentor qualifications, aiming to understand feedback patterns and gaps. Analysis revealed inconsistencies in the frequency, specificity, and timing of feedback, with notable differences across mentor roles (HCA, EN, RN).

These findings informed the design of a structured escalation pathway and accompanying support package, enabling mentors to identify and address concerns early, prior to formal assessment or failing outcomes. Preparatory work, networking, and initial implementation steps have commenced, with a formal pilot planned for 2026 across two ARC sites to evaluate usability, mentor engagement, and early perceptions. This research demonstrates how data-driven analysis can guide the development of tools to strengthen feedback practices, support mentors, and enhance undergraduate nursing student learning in clinical placements.

Author
Stacey Porter is a Nurse Educator passionate about supporting nursing students across Bachelor, Enrolled, and Postgraduate programs. She uses real-world examples and simulation to enhance learning and embraces innovation in teaching. Her research focuses on aged care clinical education, improving communication and feedback, and fostering collaboration between industry and tertiary education to support student success.

Paper ID: 220

Whakawhanaungatanga in practice: Tools and approaches for collaborative learning in design

Denise Narciso (Otago Polytechnic); Taryn Ormsby (Otago Polytechnic)*; Jon Wilson (Otago Polytechnic)

This research aimed to explore the value of relationships in the design learning environment. Our research draws on Bishop's use of whakawhanaungatanga in the educational setting, which emphasises relationships, reciprocity, and shared responsibility in learning. While Bishop focused on secondary education, we explore how his kaupapa Māori framework of relational, power-sharing teaching can inform tertiary design education at Otago Polytechnic. Although collaborative learning is widely discussed in design education literature, few studies examine how Indigenous relational approaches can shape design education and practice.

In the first phase of the research, we drew on staff reflections and classroom observations to understand how whakawhanaungatanga might shape group work in design projects. We examined how tools such as team charters, skills matrices, and self- and peer-evaluations promote transparency and shared responsibility, supported by digital platforms like Milanote, OneDrive, and MS Teams. These practices informed the development of a kaupapa Māori model of tertiary design teaching grounded in relationship-building and connection. Over six years, these tools have been scaffolded into the curriculum and refined iteratively. Data was gathered through staff critically reflecting together on the effectiveness of the iterative changes we were trying to make.

Our findings in employing this approach in design studio papers shows it supports collaborative learning, teamwork, and professional values. It benefits students by fostering collaboration and accountability, helps teachers create inclusive, responsive learning environments, and guides stakeholders and clients toward projects that are participatory and socially responsible.

Future research will interview students and staff to explore the impact of whakawhanaungatanga-informed approaches on teaching and learning from broader perspectives. Through this presentation, we hope to foster dialogue and receive critical feedback from colleagues and design practitioners.

Author
Taryn Ormsby is a Māori artist, designer, and Kaiako (lecturer) of Ngāti Maniapoto and Pākehā descent within the School of Design at Otago Polytechnic. Having worked in the design industry for more than 15 years in Australia, London, and now Aotearoa (New Zealand), she blends a deep understanding of communication design in practice with a genuine curiosity for effective methods of teaching.

Paper ID: 225

Enhancing Green Star in New Zealand: A comparative analysis of global rating systems and improvement in sustainability perspective

Yanxi Long (Otago Polytechnic Auckland International Campus)*; Srividya Krishnamoorthy (Otago Polytechnic Auckland International Campus)

Green Star plays an important role in sustainable practice in New Zealand's built environment. It offers a structured process for assessing the sustainability of buildings to reduce environmental impact and improve performance in areas such as energy use, water efficiency, and indoor air quality. This report aims to explore the structure, applicability, and effectiveness of the Green Star tool in New Zealand for homeowners, developers and builders with a focus on its rating process and certification standards. The research applied a qualitative methodology which gathered and analysed data from academic sources, official guidelines papers, and industry reports. The analysis found that although Green Star provides a valuable structure, there are several challenges faced by different stakeholders. Developers often struggle with the high upfront cost and long certification process. Builders are affected by the need for new skillsets and documentation burdens, while homeowners may lack awareness or see little personal value in certification due to lack of mandated requirements.

Therefore, this report compares Green Star with international systems which vary in scope, cost structure, government involvement, and public awareness. Green Star can be significantly improved by integrating key practices from global systems. It can take mandatory enforcement and minimum performance standards from BREEAM to ensure broader and more consistent application. It can integrate flexible certification options and streamlined documentation from LEED to reduce complexity and enhance user accessibility. From WELL, it can adopt a stronger focus on health, wellbeing with a human-centric design in indoor comfort, air quality, and occupant satisfaction. Lastly, it can borrow the use of lifecycle-based environmental impact calculations and cost benefit transparency to improve long-term planning and policy alignment from MPG. These integrated improvements would help Green Star become more effective, widely adopted, and aligned with international best practices.

Author

Yanxi Long is a Quantity Surveying student in her third year of study at Otago Polytechnic Auckland International Campus. She is very enthusiastic about green building and sustainability in New Zealand and the global aspect as these play a big part in creating an eco-friendly environment. This research is Yanxi's study for the Bachelor of Construction Management. The paper will be presented with the co-author who is also Yanxi's lecturer.

Paper ID: 226

How good is my study action plan? Systematic application of data science in LLM retrieval augmentation for rewriting and grading early childhood trainee submissions

Todd Cochrane (Nelson Marlborough Institute of Technology)*

This research undertook to understand how to design and develop an educational tool enhanced by LLM techniques, that reviews and grades ākonga study action plans. Data science analysis and measurement were systematically applied to develop that understanding using a design-based research approach.

A large commercial learning recommender system (LRS), with over 50 million users, provisions modules on topics such as safe and healthy environments for certification of early childhood education centre employees. To be certified, employees submit a study action plan that reflects on the content of the module and describes how they will apply their learning at their workplace. The LLM enhanced system produces for each submitted study action plan: a grade from zero to five, a rewrite of the study action plan, and an explanation for the grade given.

Data science techniques were investigated and applied to understand the data and its informational value. K-Means analysis of embeddings of samples taken from 140,000 anonymised submissions indicated the data can be put into categories that correspond with the expected types of submission. To determine consistency the same technique to ensure grading consistency in humans was applied to the marks produced by the system. Any variation in the grade given by the system was different by one. The system was compared with a human marker; it is more aligned with the marking schedule, with less distribution of the marks than the human marker. The system did not drift in its grading; it was more consistent and produced median grades that are similar to the human marker median grade.

By undertaking a data science-led approach in this design-based research we can assert that this design produced a measured outcome with known variation in its outputs and that the produced artifact can be usefully deployed with guaranteed outcomes for ākonga and kaiako.

Author
Todd Cochrane has a PhD in Education and a BSc (Honours) in Computing. Dr Cochrane has worked as a science programmer in epidemiology. His research domain and interests are educational technology design and development research, AI, 3D technology, applied graph theory, and applied data software development. Collaboration and interdisciplinary work are mediated through MUVEs in 3D virtual worlds in vocational education context.

Paper ID: 235

Vine pruning—When tuakana-teina might not be enough. An application of hDAS for immersive 3D technology to develop vine pruning skills

Todd Cochrane (Nelson Marlborough Institute of Technology)*; Stewart Field (Nelson Marlborough Institute of Technology); Sai Krishna Srinivasan (Nelson Marlborough Institute of Technology); Nelly Asmatullayeva (Nelson Marlborough Institute of Technology); Paul Devine (Nelson Marlborough Institute of Technology)

In the Aotearoa/New Zealand wine industry vine pruning is often undertaken by Regional Seasonal Employer scheme (RSE) employees. Vines have a limited lifespan due to endemic fungal infection that starts lower in the grapevine, and each season reaches further up the vine. Vine pruning skill is propagated in a tuakana-teina way. The focus of the training is to prune in an efficient way; the gain in profit can relate to the speed at which vine pruning can be achieved. That can damage grapevines. This research develops a designed intervention in training, which through quality induces less loss of grape production and damage to the grapevines.

The research applies Hybrid (educational) Design-based Agile Software development (hDAS) as a methodological frame that inculcates educational theory into the design and implementation of education technology. hDAS, in phases, provides the methodological frame in which immersive 3D Virtual Reality technology is being developed for vine pruning. The design inculcates social constructivist authentic situated learning and legitimate peripheral participation (LPP) through hDAS. Discipline expertise is applied with the aim to produce as close to authentic situations as possible for trainee vine pruners.

Intermediate design results from hDAS Phase One are presented. In Phase One a training intervention using 3D technology is in development. Shed-based training is to be enhanced with low-cost 3D VR headset-based vine pruning training. The trainees work from an expert exemplar, in an immersive 3D VR game in which they practice vine pruning in an authentic-as-possible manner. A prototype VR system is under development, in which ākonga will take part in training practice with the system to provide feedback into the trials in the field.

Author

Todd Cochrane has a PhD in Education and a BSc (Honours) in Computing. Dr Cochrane has worked as a science programmer in epidemiology. His research domain and interests are educational technology design and development research, AI, 3D technology, applied graph theory, and applied data software development. Collaboration and interdisciplinary work are mediated through MUVEs in 3D virtual worlds in vocational education context.

Paper ID: 236

Evaluating the feasibility of exterior cladding materials in New Zealand luxury homes: Balancing market demand and supply

Srividya Krishnamoorthy (Otago Polytechnic Auckland International Campus)*; Yongjian Li (Otago Polytechnic Auckland International Campus); Sabrina Arklie (Otago Polytechnic Auckland International Campus)

In high-end residential development, exterior cladding materials significantly influence both the visual identity and technical performance of luxury homes. In New Zealand, this choice is critical due to diverse climatic conditions, growing demand for architectural distinction, and heightened durability concerns following the leaky building crisis. Homeowners and developers increasingly prioritise factors beyond aesthetics, including weather resistance, thermal efficiency, maintenance costs, and material prestige.

Commonly used cladding options include timber, brick veneer, fibre cement panels, plaster systems, metal, and natural stone—each offering distinct advantages and limitations. Despite their popularity, the practical feasibility of these materials, considering cost, supply availability, regulatory compliance, and client preferences, remains underexplored in the context of New Zealand's luxury housing market. While a decline in sales in Auckland's high-end market is noticed, relatively, regional luxury markets are experiencing growth. There is also significant demand in the luxury rental market, with some foreign investors using short-term rentals as a "try-before-you-buy" strategy. Therefore, the need of the hour becomes to analyse the market factors within the context of luxury homes.

This study addresses this gap through a qualitative research approach, employing systematic literature review and content analysis. A Relative Importance Index (RII) was applied to rank client expectations and material performance factors. Results indicate that 'aesthetics' achieved the highest RII (0.60), while 'cost' ranked lowest (0.24), highlighting the dominance of visual appeal in luxury housing decisions. Findings also reveal a growing trend towards composite facades that combine multiple materials to balance tradition, innovation, and texture. Furthermore, most cladding materials identified are imported, reflecting recent legislative changes and evolving market dynamics. These insights underscore the need for informed material selection strategies that integrate sustainability, performance, and client aspirations in high-end residential construction.

Author

Srividya Krishnamoorthy is a Senior Lecturer at Otago Polytechnic's Auckland International Campus. With a strong background in construction education and academic leadership, Srividya brings a rich blend of practical insight and pedagogical expertise to her teaching style, fostering critical thinking and collaboration among students. Srividya works toward creating meaningful learning experiences that bridge the gap between classroom and industry.

Paper ID: 239

Serious games: Initial findings of a design-based study of custom playing cards in Materials and Engineering foundation papers

Jonathan Muhl (Southern Institute of Technology)*

This study aimed to address difficulties in teaching foundation courses and is applicable to a range of disciplines. Key problem areas identified included:

- Imprecise use of language. Properties such as Strength, Hardness and Toughness have specific, often conflicting, meanings in engineering, but may be seen as interchangeable in general use.
- Well established educational theories such as Vygotsky's social constructivism, Bandura's social learning theory, and Piaget's stages of cognitive development identify social interaction, collaboration, and observation as being important in helping learners develop their skills and knowledge, but have been difficult to incorporate in Engineering classrooms.
- Not all students respond well to traditional teaching methods with neurodivergent learners often struggling to stay engaged.

In this context the study aimed to enhance student learning and retention, technical vocabulary, concept definitions, and technical data, while improving inclusiveness and accessibility through serious games and social learning.

A design-based research methodology of design, test, refine, and redesign was used. An initial set of matching cards was developed and used at the start of classes in a group setting. Initial guidance was given but cohorts were encouraged to evolve and adapt the use over time. Learner feedback, gathered through survey and in-class discussion, was used to refine game play and card redesign.

Initial results are based on small cohorts (4–8 students per class), therefore limiting the scope for quantitative analysis. Qualitative findings based on in class observations and formative assessments appear to show improved understanding of key concepts and reliable use of correct vocabulary compared to previous years. Student engagement is positive with regular and passionate peer discussion apparently aiding learning and inclusion.

Author

Jonathan Muhl currently teaches engineering at SIT with interests in AM, instrumentation and design. He graduated from The University of Edinburgh in Electrical and Mechanical Engineering in 1990 with another 10 years at the University in research and teaching. In 2001 he expanded his main research into a start up, Intexia. Previous research interests included Wave Energy, Chemical and Electrical Machining, Ink Jet printing, and Surface Metrology.

Paper ID: 246

Utilisation of drone technology in construction monitoring and surveying: Case studies from New Zealand projects

Hong Liu (Otago Polytechnic Auckland International Campus); Priyanka Raina (Otago Polytechnic Auckland International Campus)*

Even though drones have shown clear benefits in construction around the world, their use in New Zealand's construction industry remains relatively limited both in terms of technology and regulation. Some local projects have successfully adopted drones for basic tasks such as surveying and site inspections, but there is little evidence or documentation that summarises the outcomes, challenges, and opportunities in the New Zealand context. More importantly, while many countries are already using drones for advanced applications, these practices are not yet widely adopted in New Zealand. This creates a knowledge gap in understanding how advanced drone applications could be adapted to meet local industry needs and help address challenges such as labour shortages, rising project costs, safety risks, and the demand for greater productivity.

This research aims to investigate and understand the global applications of drone technology in the construction industry. By adopting a qualitative research approach focusing on systematic literature review, this research specifically examines the use of drones and UAVs globally and within New Zealand, aiming to evaluate both international practices and local applications in order to provide a comparative analysis. Drone use was categorised into three stages (pre-construction, during construction, and post-construction). It was found that the use of drones is limited during the second stage (during construction). Further empirical research is needed to establish the perceived benefits of drone technology versus initial investment costs and the training required for effective implementation.

Author

Priyanka Raina is a Senior Lecturer at Otago Polytechnic Auckland International Campus. She teaches courses related to construction management and quantity surveying, including Construction Technology, Building Services, Programming, Environment, Law and Contracts, Procurement, Property Development, and Investment. Her professional interest areas are teaching and research in the areas of Construction Education, Construction Law and Contracts, and Sustainable construction.

Paper ID: 252

Narrative as pedagogy: Teaching active listening in nursing education through kuia-informed research

Shirley Lyford (Toi Ohomai)*; Tepora Emery (Toi Ohomai)

This presentation explores how learnings from the Mai i te Kuinga; Reifying Māori Success at the Source research project (2022–2024) have informed approaches to teaching active listening to Bachelor of Nursing students at Toi Ohomai Institute of Technology. The researchers will share practical examples of how narrative-informed teaching supports students to become reflective, empathetic, and effective listeners in their clinical practice.

Undertaken by tauira (students) and kaiako (teachers) Mai i te Kuinga explored definitions and lived expressions of Māori success through the worldviews and experiences of kuia. Four Māori students, as kairangahau teina (emerging researchers), returned to the wellsprings of their own whānau—their kuia (grandmothers or grandaunts)—to gather, write, and explore stories of intergenerational Māori success and flourishing.

Using narrative inquiry and guided by the Toi Ohomai institutional values, the research sought to surface alternative definitions and measures of Māori success—beyond enrolment, course completion, attendance, and qualification rates—that better reflect Māori realities. The insights gained have since shaped pedagogical approaches within nursing education, particularly in the teaching of active listening. Drawing on narrative research principles, the presentation highlights how patients' stories—often told in the present, rooted in the past, and shaping their future, can deepen understanding, connection, compassion, and responsiveness to clinical practice when they are deeply heard.

Narrative inquiry, which centres on making sense of experience through storying, emphasises the interplay between people, place, and time. The dimensions align closely with Māori and indigenous storytelling traditions and were central to the collaborative approach taken in Mai i te Kuinga. In the classroom, these insights are now used to help nursing students develop the skills to listen attentively, recognise the layers within a patient's story, and use that understanding to inform culturally responsive, intergenerational and person, and whakapapa-centred care.

Authors
Shirley Lyford is an academic staff member in Te Tohu Paetahi Tāpūhi (BN) programme at Toi Ohomai Institute of Technology. She teaches across the Rotorua and Tauranga campuses. Her background is both clinical and nursing education. Her teaching focuses on supporting students to develop safe, competent, and culturally responsive nursing practice. Shirley's particular interest is culturally grounded approaches to teaching and learning.

She co-authored Te Hihimā, a bicultural philosophical framework for nursing education that uses the metaphor of a woven cloak to represent the integration of knowledge, protection, and professional identity in nursing. Her work contributes to ongoing efforts to strengthen inclusive and meaningful learning environments for all nursing students.

Tepora Emery (Te Arawa/Tainui) is a kaupapa Māori researcher committed to centring Māori voices, values, and lived experiences in research. Her work spans areas of cultural identity, wellbeing, and whānau resilience and flourishing. Tepora brings a background in community-based research, storytelling, and healing practices grounded in te ao Māori. She is dedicated to research that uplifts, empowers, and serves whānau, hapū, iwi, and hāpori (communities).

Paper ID: 261

Social fabric creation in collective creative research

Nicol Sanders-O'Shea (Toi Ohomai)*

A reflective narrative on the development of a series of creative works by a group of intergenerational female artists to present responses from artist participants and audience surveys to examine the research question: How have the significance and consequences of gendered social constructs evolved over time, and what can we infer about the future implications from a multidisciplinary perspective?

Over three years, the Collective tested and refined their diverse perspectives. Social fabric formed through a series of interactions, social connections, cooperation, and shared values that influenced creative practice and defined their thinking as female creatives. This resulted in new creative work for a range of exhibitions, connecting issues of gender, ritual, and rites of passage. This presentation will discuss how much visual and contextual clarity was gained, improving abilities to discuss and write about concepts and develop creative practice. The presentation will include the value gained by viewers who were not accustomed to this kind of dialogue, which challenged viewer ideologies through the process of viewing, reading, and listening. Viewers were able to add responses to a survey at three different exhibitions in North Island centre that the collective analysed thematically.

The research attempts to shed light on the processes of self-perception and identity formation, questioning how the legacy of colonialism deeply influenced societal structures, rigid gender norms, nuclear family ideals, and capitalist frameworks, and continues to inform modern life and social policy. These inherited constructs are embedded in language, institutions, domestic life, and even in the garments we wear. Collectively these artists questioned their inherited structures of gender and power.

The outcome of this research aim was explorative rather than a final exhibition. The research investigation focuses on a series of meetings and critiques prior to and after exhibitions to foster the direction of creative research, to review, critique, and understand each artist’s development or work in-progress. What they made was social fabric to support, empower, and inspire.

Author
Nicol Sanders-O'Shea has a Master of Fine Art with first class honours from Elam School of Fine Arts, University of Auckland, a Bachelor of Visual Arts, and a Graduate Diploma in Tertiary Teaching from AUT University. She is the Academic Leader for Arts, Design, Music and Media portfolio at Toi Ohomai Institute of Technology, based in Tauranga. She won the WSA New Zealand Painting and Printmaking Award in 2015 and in 2018 participated in TPR6 printmaking installation residency in Manhattan, New York.

Paper ID: 262 (Creative Practice Presentation)

SUSS Photo Essay

Nicol Sanders-O'Shea (Toi Ohomai)*

This curated exhibition presents a photo-essay from a series of five exhibitions and creative works created by the SUSS Collective centred on the same kaupapa. The aim of the photo-essay is to present a selection of collective creative research displaying photo drops to visually and cohesively link research outcomes, contributing to the overall research narrative. The exhibition will present how the artists' collective creative practice critically examined gendered social constructs through intergenerational, multidisciplinary creative practice. Developed through participatory and equitable research methods, this exhibition reflects co-designed collaboration to explore identity, social change, and rangatiratanga.

This exhibition embraces mahi toi as a primary research methodology, where creativity is both a mode of inquiry and a form of knowledge. It engages practice-led and practice-based research across visual arts, design, and digital media, with each artist contributing a unique perspective shaped by lived experience and cultural context. These contributions are in dialogue with both Te Ao Māori and Te Ao Pākehā worldviews, challenging traditional narratives and highlighting the arts' capacity to document, transform and empower.

Accompanying the exhibition will be a printed contextual catalogue featuring individual artist statements and collective responses to the research questions and creative process. The audience will be able to provide feedback on the exhibition via a QR code to a survey questionnaire to add audience perspectives to this research from their individual experience. This creative research directly informs educational activities by modelling collaborative methodologies, offering reflective insights into creative inquiry, demonstrating strategies for exhibition design, implementation, and the resolution of complex concepts through art and design.

Author
Nicol Sanders-O'Shea has a Master of Fine Art with first class honours from Elam School of Fine Arts, University of Auckland, Bachelor of Visual Arts and Graduate Diploma in Tertiary Teaching from AUT University. She is the Academic Leader for Arts, Design, Music and Media portfolio at Toi Ohomai Institute of Technology, based in Tauranga. She won the WSA New Zealand Painting and Printmaking Award in 2015 and in 2018 participated in TPR6 printmaking installation residency in Manhattan, New York.

SUSS Collective investigates social fabric from an intergenerational multidisciplinary perspective

Through the studio process of discovery and experimentation research, the dominant gendered social construct emerged…

The SUSS exhibitions presented a range of work, connecting issues of gender, ritual and rites of passage.

Paper ID: E2

Voices of undergraduate nursing students living with disability: A research proposal

Gayle Rose (Ara Institute of Canterbury)*; Shimoné Breedt (Ara Institute of Canterbury)*; Margaret Hughes (Ara Institute of Canterbury); Suzette Harris (Ara Institute of Canterbury); Rose Fitzgerald-Carter (Ara Institute of Canterbury); Katie Wilkinson (Ara Institute of Canterbury)

Aim: To explore the perspectives of undergraduate nursing students living with disability regarding their experiences and access to social support during their academic journey.

Background: Nursing students living with disability have been identified as experiencing lower levels of academic achievement. Research shows a correlation between social connectedness, and academic success in the general student population. A review of the literature indicates that social support can come from various sources, including family, peers, faculty and social media. However, there is limited research addressing how students living with disability perceive and experience social support. A research proposal focused on understanding the role of social support on academic success and developing a sense of belonging from the perspective of undergraduate nursing students living with disability will be presented.

Methodology: A qualitative approach, allowing for an in-depth exploration of participants' subjective experiences and a qualitative descriptive design to describe their perspectives has been chosen.

Methods: Following the literature review, ethics approval along with Māori consultation will be sought. Purposive sampling will be used so that the experiences and perceptions of undergraduate nursing students who self-identify as having a disability and are eligible for academic disability support services can be described. Individual semi-structured interviews will be conducted by interviewers selected from outside the Bachelor of Nursing team. Data will be analysed using thematic analysis.

Implications: Understanding the correlation between social connections, student engagement, programme success, and the development of self-confidence can inform future faculty support mechanisms, identify assumptions, and stimulate further research. Overall academic achievement can lead to increased graduation rates among students living with disability and promote diversity in the healthcare workforce. Ultimately sharing these insights with industry stakeholders may enhance awareness and responsiveness to the needs of students living with disability.

Author

Gayle Rose is currently a senior academic lecturer and programme co-ordinator for the Bachelor of Nursing and graduate certificate programmes at Ara Institute of Canterbury. Gayle is married, and has two stepdaughters and one son whose learning disabilities and educational experiences have led to a strong desire to support those students who have disability.

Paper ID: E3

Strengthening Tiriti o Waitangi and Māori health nursing in Aotearoa

Maryann Wilson (Ara Institute of Canterbury)*

Background: Māori nurses are under-represented in the New Zealand health workforce. Evidence suggests that that Māori experience multiple barriers to entering and remaining in nursing education. These barriers include a lack of academic preparation, challenging prior educational experiences, competing obligations and limited pastoral support. To address the increasing need for Māori nursing in the health workforce, it will be imperative to create a visible supportive and empowering educational culture within schools of nursing.

Ara Institute of Canterbury is committed to honouring Te Tiriti o Waitangi and equity for Māori, prioritising the success of Māori learners. The delivery of a new Bachelor of Nursing (Puahou Tapui o Aotearoa) in 2026 is included in this vision. The focus of this programme is equity, by putting ākonga at the centre of all nursing education.

Kaiāwhina Māori ākonga support has been part of health programmes at Ara for over a decade. Other than anecdotal feedback from ākonga and feedback from student surveys, the impact of this role has not been fully explored. This presentation will outline a proposed study which aims to fill this knowledge gap.

Research question: What are Māori students' perspectives on the role of the Kaiāwhina Māori in supporting their educational journey through the nursing degree at Ara?

Methodology and methods: Underpinned by Kaupapa Māori research principles, a mixed methods study will be undertaken using a quantitative survey and qualitative interviews and/ or focus groups. The study will be guided by Mātauranga Māori world views and will be undertaken by Māori Kaiako. Participants will be recruited from all years of the Bachelor of Nursing and the Diploma in Enrolled Nursing programmes.

Application to practice: Insights from the study will assist the continuous improvement of the Kaiāwhina Māori support role, contributing to Māori student engagement and success.

Author

Maryann Wilson (Ngāi Tahu, Kāti Māmoe), RN, MN, PGDipHci (mental health), GradDipTertTchgLn, is a Senior Academic in the Department of Health Practice at Ara Institute of Canterbury. Maryann teaches into Year Two of the Bachelor of Nursing programme, Graduate Nursing Programme and supports ākonga in their Mental Health and Addiction clinical placements. Education, Research and Māori Health are aspects of nursing practice Maryann enjoys.

Paper ID: E4

New Zealand and Australian nurses' family engagement: Capturing family nursing practice across nursing care

Anna Richardson (Ara Institute of Canterbury)*; Dr Sandra Richardson (Health New Zealand)

Aim: To explore nurses' attitudes toward the importance of families and perceived outcomes of family involvement in nursing care—an International Family Nursing Association Australia and New Zealand Chapter Project.

Problem statement: Is there a relationship between nurses' attitudes towards the importance of families in nursing care and their perceived outcomes from family involvement in care?

Method: A descriptive quantitative approach guided by the Family Systems Theory was utilised to promote the inclusion of family as the unit of care. A cross-sectional survey design targeted the Australian and New Zealand Registered Nurse population, using an anonymous online questionnaire constructed with two validated tools: The Families' Importance in Nursing Care—Nurses' Attitudes (FINC-NA) (26 items), and the Family Involvement in Care—Nurses' Perception of Outcomes (FIiC-NPO) (7 items), together with open-ended questions.

Results: There were 219 completed surveys of registered nurses in Australia (250 invited) and New Zealand (150 invited). Recruitment occurred through standardised advertisement via professional nursing newsletters and professional nursing organisations' email distribution lists and their associated social media platforms. Analysis highlighted nurses were engaging families with their practice across a variety of clinical settings, such as critical care, child health, cancer, palliative, aged, primary health care, and mental health nursing. Nurses tailored their care to the person and family, recognising the need to provide culturally appropriate care. Family was viewed as a resource to assist the person to meet health outcomes. Relational practice was threaded through the findings, emphasising the importance of building trust and clear explanations with the person and family.

Significance: Understanding nurses' attitudes and perceived outcomes of family inclusion in care provides future direction for the development of interventions to promote family inclusion in care. Nurses' relational practice is vital to be responsive to the health needs of the person and family.

Author

Anna Richardson is Bachelor of Nursing Programme Leader for Ara Institute of Canterbury. Her main research interest is whānau and family nursing engagement, along with the application of the Calgary Family Assessment Model in practice. Other research interests include disaster nursing and cultural safety, particularly application of cultural safety in practice. Anna has been an academic in nursing education for 35 years and is passionate about nursing and nursing education. Anna's clinical focus is primary health care, and she has just returned from six months' academic study leave, with a refreshment in public health nursing in Christchurch.

Paper ID: E5

Enhancing clinical reasoning and patient-centered care: The role of concept mapping in nursing education and practice

Julie Bowen-Withington (Ara Institute of Canterbury)*; Sara Vermeulen (Ara Institute of Canterbury); Katie Wilkinson (Ara Institute of Canterbury); Ruth Sutton (Ara Institute of Canterbury)

The intention of this research is to explore undergraduate nursing ākonga experiences of using concept maps whilst in clinical placement, and how this tool stimulates critical thinking. Weaving and scaffolding of the concept map throughout the Bachelor of Nursing curriculum has the potential to enable nursing ākonga to develop critical thinking and clinical reasoning skills to inform practice and ultimately meet NCNZ competency to become Registered Nurses. Exploring ākonga experiences through a pragmatic qualitative descriptive lens allows for the provision of a comprehensive and detailed, yet straightforward summary of experiences as described by participants. With ethics approved this research is set in a three-year Bachelor of Nursing program based in Aotearoa New Zealand, the population being ākonga across the three years of the programme. Employing multiple methods, including focus groups and qualitative questionnaires, data exploring students' experiences and perceptions toward using the concept map are generated. An anonymous qualitative questionnaire survey using Qualtrics software was disseminated to approximately 1500 ākonga across the BN program including year one, two and three ākonga who had recently completed a clinical experience. Interested ākonga have been invited to join focus groups for respective years. Survey responses will be collated to present preliminary results from the questionnaire survey. Data from focus groups is still to be collated and analysed. The research methodology of the study and preliminary findings from the questionnaire survey will be presented. This research is important as it explores the effectiveness of concept maps, which can ultimately lead to effective teaching methods and improved educational outcomes for nursing ākonga. By fostering critical thinking and professional competence, concept maps can contribute to improved patient care and outcomes. In addition, understanding how concept maps can contribute to ākonga personal and professional growth, whilst enhancing their influence in patient care, helps integrate cultural competence into nursing education, which is vital in Aotearoa New Zealand's diverse healthcare environment.

Author

Julie Bowen-Withington's background is in general nursing, midwifery, women's health, sexual health, family and child health, Indigenous health, remote area nursing (Australia), population health nursing, nursing management, and nursing education. Since January 2006, Julie has been a full-time nursing lecturer in the Ara Institute of Canterbury Bachelor of Nursing programme and is currently a Principal Nursing Lecturer and simulation lead for the Ara Department of Health Practice. Julie's main research interest areas include nursing education and simulation and recently completed PhD studies through AUT in 2022, focusing on simulation and the emerging discourses within the use of high-fidelity simulation in pre-registration nursing education.

Paper ID: E6 (Research Poster)

Non-specific chronic low back pain: What does osteopathy do? Preliminary findings

Anne-Lise Girardin (Ara Institute of Canterbury)*

Low back pain (LBP) is the most common cause of disability in the world and the most frequent reason for seeking osteopathic treatment, with non-specific LBP being its most common form. When chronic, it represents a significant economic burden. Recent systematic reviews and a meta-analysis indicate that there is little-to-moderate evidence that osteopathy may help chronic pain sufferers, which may be due in part to non-robust study designs and the small number of studies. There is also minimal research on the potential neural networks that could be affected by osteopathic treatment. Gaining an understanding of how treatment modalities influence neural networks would inform professional practice, enable tailored treatment plans, and support funding access.

A literature review of articles available from the CINAHL and PubMed databases was undertaken; of the 3,166 articles identified, 26 met the inclusion criteria. These criteria included studies focused on osteopathic techniques, investigating pain modulation mechanisms, and published within the last decade. Preference was given to peer-reviewed human studies and theoretical models with direct clinical applicability. Studies were excluded when addressing specific diagnoses (e.g., disc herniation), non-osteopathic interventions, animal research lacking translational value, and articles reporting solely on clinical outcomes.

Preliminary findings suggest that osteopathy may modulate pain perception through activation of the reward system and descending inhibitory pathways, potentially due to its unique combination of hands-on and hands-off approaches. These effects may be mediated by structures like the anterior insula and anterior cingulate cortex, which are involved in interoception, emotional processing, and pain modulation. Future studies should aim to balance internal and external validity in manual therapy trials, addressing challenges such as blinding and heterogeneity caused by contextual factors like patient expectations and therapeutic environment. Pragmatic trial designs may offer a solution by enhancing methodological rigor while maintaining real-world relevance and minimising bias

Author
Anne-Lise Girardin is a registered osteopath and lecturer on the osteopathy programmes at Ara with a Postgraduate Certificate in Health Sciences (Pain and Pain Management). Her work explores the neurophysiological mechanisms of manual therapy, with a focus on chronic pain. She is particularly interested in how touch and contextual factors influence pain perception and therapeutic outcomes in osteopathic care.

Paper ID: E7 (Research Poster)

Lecturers' perspectives on AI in nursing education: A proposed collaborative auto-ethnography

Avril Guihen (Ara Institute of Canterbury)*; Amy Curry (Ara Institute of Canterbury); Matt Cookson (Ara Institute of Canterbury)

Background: Artificial intelligence (AI) is increasingly integrated into tertiary education, including clinical assessments. While AI offers efficiency and innovation, it raises important pedagogical, ethical, and cultural questions. A recent course restructure required a new assessment that could be completed outside the clinical environment while aligning with the New Zealand Nursing Council (NZNC) Competencies for Registered Nurses. This assessment asks students to analyse the implications of AI use in healthcare, including professional responsibility, patient safety, and culturally safe practice.

Aim: This proposed pilot study will explore lecturers' reflections on designing and implementing this assessment, and their observations of student engagement with AI-generated content.

Process: To address growing concerns about the use and misuse of AI in student work, the assessment requires students to compare an AI-generated clinical procedure with an evidence-based guideline. Lecturers will reflect on this process using collaborative auto-ethnographic techniques. Ethics approval is not required as the study focuses solely on lecturer reflections and does not involve student data.

Expected contribution: The study will provide insights into the opportunities and limitations of AI-generated content in nursing education, including issues of cultural safety and indigenous knowledge. These reflections aim to inform future strategies for integrating AI responsibly into nursing curricula.

Paper ID: E8 (Research Poster)

A scoping review for clinical reasoning and differential diagnosis of abdominal pain attributed to musculoskeletal dysfunction in primary health care

Warwick Shillito (Ara Institute of Canterbury)*; Sibi Walter (University of Canterbury); Kesava Kovanur-Sampath (Royal Melbourne Institute of Technology). Presented by Peter Olsen (Ara Institute of Canterbury).

Background: Abdominal pain is a frequent reason for consultations in primary health care, commonly attributed to visceral pathology. However, a proportion of cases include musculoskeletal dysfunction. Evidence surrounding diagnostic reasoning and recognition of musculoskeletal causes remains sparse.

Aim: This review aimed to determine the proportion of abdominal pain cases in primary care attributable to musculoskeletal origins and evaluate the clinical reasoning methods applied in their diagnosis.

Methods: A scoping review was undertaken following the Arksey and O'Malley framework. Comprehensive searches of peer-reviewed literature in English without date restriction were conducted in databases including PubMed, EMBASE, CINAHL, Scopus, and Google Scholar. Keywords included abdominal pain, visceral pain, musculoskeletal, myofascial, clinical reasoning, and differential diagnosis. Themes extracted from selected articles included types of primary care practice, diagnostic methods, musculoskeletal syndromes, and treatment approaches.

Results: Nine studies met the criteria. Abdominal pain was the cause of 14% of general practice consultations, with 3.6% attributable to musculoskeletal syndromes. Predominantly these were myofascial pain syndrome and anterior cutaneous nerve entrapment syndrome. Carnett's sign as a clinical test had 85% sensitivity and 97% specificity in differentiate musculoskeletal causes. These conditions were associated with chronic pain, extensive diagnostic workups, poor treatment outcomes, and elevated psychological distress. Diagnostic reasoning relied on patient history, pain characteristics, and targeted physical examination.

Conclusion: Musculoskeletal dysfunction accounts for approximately 4% of abdominal pain in primary care. Diagnostic reasoning can accurately differentiate these dysfunctions with minimal risk of missing visceral pathology.

Implications for practice: Poor knowledge of musculoskeletal causes in abdominal pain may contribute to chronicity, low diagnosis, and unsuccessful treatments experienced by patients.

Future research: Future studies should evaluate treatment programmes targeting musculoskeletal causes of abdominal pain in primary care.

Author

Warwick Shillito is a senior academic staff member at Ara Institute of Canterbury lecturing in clinical anatomy, physiology, pathology, image interpretation, and general medicine. He is currently the acting programme leader of the Bachelor of Medical Imaging. He was involved in establishing the Bachelor of Musculoskeletal Health and Postgraduate Diploma in Osteopathy at Ara. He is currently a Doctoral student at the University of Canterbury, and has a Master of Health Science and a Postgraduate Diploma in Health Science (Musculoskeletal Management) from the University of Otago, a Bachelor of Applied Science (Chiropractic) from the Royal Melbourne Institute of Technology University, and a Bachelor of Science (Psychology) from the University of Canterbury. Warwick was a chiropractor in private practice in Singapore and Australia before moving into education.

Paper ID: E9

Beyond the syllabus: Delivering the Ara Bachelor of Nursing programme in a cross-cultural context

Rose Fitzgerald-Carter (Ara Institute of Canterbury)*; Deena Boyd (Ara Institute of Canterbury); Gayle Rose (Ara Institute of Canterbury)

This presentation offers a narrative account of delivering nursing education across cultures, highlighting the experiences of senior nursing academics from Ara Institute of Canterbury, Christchurch, in the context of the Ara–Liaoning University of Traditional Chinese Medicine (LNUTCM) partnership. From 2024–2025, Rose Fitzgerald-Carter, Deena Boyd, Gayle Rose, and Maryann Wilson engaged in face-to-face teaching in Shenyang, China, after several years of online delivery due to COVID-19.

The aim of this presentation is to share innovative teaching approaches and personal reflections on adapting the Ara Bachelor of Nursing curriculum to a Chinese educational setting. It explores the pedagogical contrasts between structured, theory-based instruction in China and the student-centred, transformative learning model of Aotearoa New Zealand. The presentation also reflects on the challenges and rewards of translating clinical scenarios into a different healthcare context, and the importance of flexibility, cultural sensitivity, and real-time adaptation in maintaining pedagogical integrity.

Key implications include enhanced strategies for supporting students for whom English is a second language, and insights into fostering engagement and success in cross-cultural learning environments. This presentation will be of interest to educators involved in international partnerships, transnational education, and culturally responsive teaching.

Authors

Rose Fitzgerald-Carter is a Nursing Lecturer at Ara Institute of Canterbury, where she Co-Leads the Professional Responsibility Course in Year One of the Bachelor of Nursing programme. In addition, Rose is the Liaoning University of Traditional Chinese Medicine (LNUTCM) Programme Coordinator. This is a collaborative nursing programme delivered in China. Rose travels regularly to China to teach Professional Responsibility and Health and Wellness. Rose's teaching practice reflects a commitment to cross-cultural collaboration and excellence in nursing education. She is passionate about fostering appreciative inquiry in teaching and values the growth she sees in students' confidence, communication, and interpersonal relationships. She feels privileged to be part of a skilled and supportive team guiding the next generation of nurses. Based in Ōtautahi Christchurch, Rose shares her home with her son, their clever German Shepherd Oreo, and two mischievous chooks—Jane and Lizzie (The Bennet Sisters). Her daughter lives in Sydney, and she enjoys staying connected with her blended whānau across Aotearoa and Australia.

Deena Boyd is a senior academic staff member at Ara Institute of Canterbury, where she leads the Mental Health and Addictions clinical paper. With over 30 years of experience across diverse mental health settings and leadership roles, Deena brings deep clinical

insight and a passion for transformative education. In 2024, she spent time teaching in China, an experience that broadened her perspective on cross-cultural mental health education and deepened her appreciation for global approaches to care and learning. Her work continues to explore the intersection of therapeutic practice, cultural context, and professional development. Deena is married and the proud mother of two grown sons and a miniature schnauzer called Diesel.

Gayle Rose is currently a senior academic lecturer and programme co-ordinator for the Bachelor of Nursing and graduate certificate programmes at Ara Institute of Canterbury. Gayle is married, and has two stepdaughters and one son whose learning disabilities and educational experiences has led to a strong desire to support those students who have dis-ability.

Paper ID: E10

How might a change in physical media unlock new forms of creativity and allow access to new subject matter?

Carol King (Ara Institute of Canterbury)*

I have been engaged in a practice-based exploration aimed at reconnecting with and reinvigorating my creative capability. I decided, after years in which I focused on figurative painting, that I would not determine in advance what I would make, but rather simply decide how and where I would work. I wondered if this purely practical change could open what I had begun to feel were 'blocked channels' in my creativity.

In painting I was producing only one or two images per year, and my flow of new ideas had slowed down to match this. Because I have limited studio space, but do have use of the Ara print presses, I decided to turn my attention to print.

Because I aimed to speed up my output, I decided that monoprint would provide a kind of swift flowing mark-making. This, combined with a fluid medium familiar to me from painting, gave me a fast process in which I could turn off a lot of my instrumental reasoning processes, accessing less conscious parts of my brain.

I settled on a "darkfield" process, starting with an inked surface, which is wiped back to create an image. As I was trying to shake off an over-focus on figurative work, I decided to start with landscapes. But I quickly realised that the ones that really worked for me were the prints that became more abstract. This was the change I was looking for.

My practical experimentation has revealed that by wiping ink away, using a range of tools, I can create not only interesting marks but a range of textures which suggested 'atmospheres.' Suddenly, these were no longer just landscapes but expressions of elemental forces—wind, air, water, and ground-scapes.

By switching media I have been able to create a visual language that has set me on this new research path. The transformation in my 'hand work' has had a kind of holistic impact on the thought-based side of the creative process. This has really clarified to me how these two sides interact. I have only scratched the surface of this exploration. The next challenge is to carry these new creative insights into other media.

Author

Carol King earned a Bachelor of Design (AVA) from CPIT in 2001 and a GradDipTchg in 2002. She has tutored in Art and Design at Christchurch Polytechnic (now Ara) since 2004. She has also taught at Hagley Community College and other schools in Christchurch. Carol is a frequent exhibitor in group and solo shows. She was a finalist in the Adam Award in 2014 and the Zonta Award in 2022.

Paper ID: E11

The use of Generative Artificial Intelligence (GenAI) to support learning in undergraduate nursing education: Scoping review

Janice Groube (Ara Institute of Canterbury)*; Alex McAllum (Ara Institute of Canterbury); Jennifer Share(Ara Institute of Canterbury)

Background: Healthcare has seen a surge in AI technologies, and nurse educators play a key role in ensuring that graduates are prepared to work within a technology-integrated health system. In undergraduate nursing education, the recent release of generative AI (GenAI) presents opportunities to personalise learning and enhance the development of critical thinking and clinical reasoning skills. However, there is limited research available to guide the application of AI in nursing education. This study utilised a scoping review methodology to identify primary evidence on how educators are using GenAI to support undergraduate nursing student learning.

Aim: This scoping review aims to identify and describe emerging evidence on the use of generative AI (GenAI) in nursing education. Initial conclusions will be presented.

Methods: This review is guided by Arksey and O'Malley's (2005) framework and the JBI scoping review methodology. Literature searches were conducted using truncation and Boolean operators across multiple databases: CINAHL, PubMed, ScienceDirect, ProQuest, ERIC, Academic Search Complete, and OVID. Google Scholar was also searched. Articles were included if they met the following criteria: written in English, peer-reviewed, primary empirical literature, and published between January 1, 2019, and May 1, 2025. A total of 285 articles were uploaded to the Rayyan Systematic Review Management Platform. After removing duplicates (n=152), 126 articles were screened, with conflicts resolved by two team members. Data analysis is currently in progress, using data extraction tables and content analysis.

Findings to date:

- 17 articles fit the selection criteria from 2022 to mid 2024. The database search and article review for the studies late 2024 to May 1, 2025 has not been completed yet.
- 11 studies used quantitative methods including experimental and non-experimental approaches. 6 used qualitative approaches.
- 5 were based in Taiwan, 2 in south Korea, 2 in the US, 2 in Morocco, 2 in Turkey, 3 in China, and 1 in the UK.
- 6 studies used Chatbots as the AI agent, 3 used ChatGPT, 3 used AI image generators, and 4 were either not described or used bespoke AI tools.

AI agents have been used in these studies to enhance nursing education in several ways, including the development of technical skills such as assessment, communication, problem-solving, emotional intelligence, critical reflection, and critical thinking. Further analysis of these applications is currently under way. The benefits of using AI in nursing education include personalisation, increased motivation, self-directed learning, greater engagement, and improved ease of access.

These have been identified as key affordances. Challenges associated with the use of AI in nursing education are also being explored in more detail.

Author
Janice Groube RN, MHlth Sc, BA (Soci), PG Cert CITchg, (Ngāi Tahu / Ngāi Tuahuriri) is currently employed as a Senior Lecturer in Nursing at Ara Institute of Canterbury. She has a clinical background primarily in perioperative nursing but with experience across other specialties. Her involvement in nurse education spans both clinical and academic roles in New Zealand and Australia. Her research focuses on older persons' health, nurse education in clinical environments, and culturally inclusive practices that engage diverse learners.

Paper ID: E13

Images that decompose: Rethinking photographic materials in the Anthropocene

Wendy Clarke (Ara Institute of Canterbury)*

What if future photographic images dissolved, decayed, and returned to the earth?
This research proposes a materially conscious practice that embeds photographic imagery into renewable, decomposable forms. This strategy explores ways to address the ecological consequences of traditional photographic materials, both analogue and digital, which are often reliant on extractive processes, toxic substances, and unsustainable infrastructures. By reframing with biodegradable substrates, the project reimagines photography not as a static record but as a dynamic, environmentally responsive medium.

As a resident of Motu Kauati-iti / Corsair Bay I am exploring the environmental impacts of urbanisation and the corresponding ecological regeneration efforts on a popular recreation area that has experienced significant changes in vegetation and water quality. Embedded in the polymers are Infrared photographs of the flora, fauna and landscape of the area, offering a non-human-centred visual perspective by using light wavelengths more common to other life forms and emphasising native vegetation.

Using a practice-led methodology, this study is testing and refining biopolymer recipes that use renewable and biodegradable constituents, including materials such as plant-derived waste and naturally occurring pigments found around Motu Kauati-iti / Corsair Bay. Preliminary results suggest the viability of biopolymers as substrates for photographic integration, offering reduced environmental impact and expanded expressive potential.

This investigation is responding to shifting priorities in contemporary art by proposing a materially conscious model for sustainable creative practice. Ultimately, it positions visual art as a vital platform for ecological inquiry and ethical engagement, promoting practices that are environmentally attuned, critically engaged, and responsive to the complexities of our time.

Author
Wendy Clarke, MA, is a mixed-media artist and a committed educator. As a senior academic staff member at Ara Institute of Canterbury, she specialises in teaching a range of photographic genres while fostering intersections with other visual arts. Clarke's artistic practice investigates the expanding boundaries of photographic expression by embracing diverse formats and technologies. She is currently expanding this research though studying a creative practice PhD at the University of Canterbury.

Paper ID: E15

What is the value of embedding ethics in electrical trades in Aotearoa?

David Bettis (Otago Polytechnic)*

Background/Rationale: In the wake of an economic downturn which is affecting 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. Currently the electrical trades industry has no Code of Ethics established for practitioners and relies on a good character declaration process. Ethics can be defined as the moral principles that govern the behaviour and decision-making of an individual.

Aim: The research aim is to understand the importance of embedding robust codes of ethics that guide practitioners within the electrical industry, primarily at a tradesperson level. 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.

Study: This study began in 2023 to explore strategies of ethical practice and their benefits within the electrical industry, focusing on a New Zealand context and considering best practices established overseas. This is the second part of the study, which provides an update on the research findings to date.

Method: In 2025, eight research interviews were undertaken. A qualitative methodology was employed, including online surveys and semi-structured interviews. Over 120 participants completed the online survey and research interviews were completed with eight members of the electrical industry within Aotearoa, New Zealand, from a wide range of electrical roles.

Findings: Early findings suggest that embedding robust ethical guidelines at a trades level can lead to improved relationships between businesses and stakeholders and improve health and safety practice.

Implications: This research offers valuable insights for business owners, industry regulatory boards, tradespeople, and educators involved in the electrical industry and vocational training.

This presentation highlights successful ethical practices and provides practical recommendations for educators and guidelines on ethical practice for electrical businesses and practitioners. For Otago Polytechnic, these insights will guide the development of more ethical, inclusive, and sustainable electrical programmes at a trades level.

Author

David Bettis is a NZ Registered Electrician with over 25 years of experience working in the electrical industry in the UK and New Zealand.

David has worked as a Tertiary Educator since 2018, teaching on the electrical pre-trade, apprenticeship, NZ Diploma and BEngTech programmes. David is passionate about the electrical industry and ensuring that vocational education programmes meet the needs of the electrical industry, which is rapidly changing due to advancements in technology, such as solar power, electric vehicles, and automation. David is currently studying for a Master of Professional Practice with Capable NZ. David's research project is on the value of embedding ethics in the electrical trade, which has generated a lot of interest and support in the electrical industry across the motu.

Paper ID: E17

Reclaiming moko kauae as a symbol of Indigenous resistance and resilience

Kelli Te Maihāroa (Otago Polytechnic)*

Aim: This presentation provides an historical review of tā moko/moko kauae (permanent markings) pre and post colonisation, including a contemporary overview of the revitalisation of moko as a symbol of Indigenous resilience today. It is concluded through an insider lens and video of the presenter's own personal journey of receiving her moko kauae.

Method: The first section of this presentation draws on research undertaken through published literature, with the second section examining the personal journey of receiving moko kauae, recounted through an Indigenous Autoethnographic approach. Whitinui (2014) describes Indigenous Autoethnography as a culturally responsive methodology to intentionally amplify personal experiences, voices, and insightful stories towards cultural revitalisation. This presentation explores the historical and contemporary adoption of moko kauae as a symbol of tribal status through whakapapa connections, and highlights the social importance in Aotearoa. It traverses the intersecting timeframes of pre- and post-European arrivals, examining perceptions of moko and the impacts on Māori society through different eras. It examines the chronological pre- and post-colonial history to illustrate cultural changes over time, where moko served as a sign of resistance to colonialisation in both the North and South Islands. This paper recounts the history of moko kauae as an identity marker and the ancient process of receiving moko as i tuku iho (gift handed down) from tīpuna. As an Indigenous storyteller, this presentation traverses the timelines of moko through to the presenter's personal self-examination of adopting moko kauae as a sign of cultural survival of her Waitaha and Tainui Waikato whakapapa.

Findings: Māori pūrākau (narratives) trace the genesis of moko as a gift from Rūaumoko, the atua and heartbeat of the whenua. Tribal pūrākau further inform us that there were at least two people who returned from the underworld with moko: Tama-nui-a-Raki in Te Waipounamu and Mataroa in Te-Ika-a-Maui. The traditional Māori term for applying permanent markings to the body is tā moko, a cultural expression of being Polynesian, shared throughout Moana Nui a Kiwi (Pacific Ocean) connecting the seen and unseen world. Mataora is the name for tā moko applied to the face of tāne (male), and moko kauae is the tribal chin markings for wāhine (female). Moko has been described as a language of symbolic design, positioned as cultural identity markers representing whakapapa, status, adornment, and accomplishments. Research shows that revitalisation of moko in the twentieth century flourished through two contexts within Aotearoa: signalling Māori gang affiliations in the 1970's, whilst symbolising Indigenous revitalisation from the 1980s onwards. For wāhine Māori, reclaiming the birthright to wear moko kauae speaks to a wider political and cultural resurgence. Moko kauae has survived the test of social and tribal identity through the collision of colonisation, suppression and oppression of wāhine Māori.

Conclusion: This sacred gift from the atua, is shared through a concluding short video, enabling a glimpse into this deeply personal and spiritual time, revealing her lifelong dream of adorning moko kauae. As a contemporary cultural identity marker, the revitalisation of moko kauae continues to connect wāhine Māori with immemorial ancestral timelines of resilience and reclamation of the indigenous self. Questions are warmly invited, in an effort to broaden a bi-cultural understanding of moko kauae as a symbol of both cultural resilience and personal identity.

Author

Professor Kelli Te Maihāroa's experience in education spans several decades and includes both primary and tertiary education, and Strategic Regional Director for Te Tāhuhu o Mātauranga, the Ministry of Education. More recently Kelli held two leadership roles at Otago Polytechnic: Tumuaki: Rakahau Māori | Director: Māori Research and (currently) Kaihautu: Te Kāhui Whetu | Capable Māori. She has extensive experience in Māori governance, engaging with both tribal and flax roots communities, stakeholders and providing strategic management. Kelli is passionate about whānau, hapū, Ngāi Māori, and Indigenous development and sits on two manawhenua boards. Her research interests are Indigenous research, cultural revitalisation kaupapa Māori initiatives and Indigenous peace traditions. Kelli was co-editor for five edited collections: *Māori and Pacific Models of Praxis* (2024*); Indigenous Autoethnography: Illuminating Māori Voices Handbook* (2023); *Decolonising Peace and Conflict Studies through Indigenous Research* (2022); *Our Sacred Māori Voices* (2022), and *Peacebuilding and the Rights of Indigenous Peoples: Experiences and Strategies for the 21st Century* (2016).

Paper ID: E18

Identity dump. How can I use photography to document and reflect on the ways sub-cultural groups 'use and own' urban space through graffiti?

Deborah Marshall (Ara Institute of Canterbury)*

I spend a lot of time walking to and from work. This journey takes me through an industrial section of Christchurch City, Sydenham. I know this space like the back of my hand. As a photographer I am always looking at the environment I am engaging with, noticing changes over time, and the transient nature of spaces.

My eye has been caught by the markings of others in the form of graffiti, especially on dumpsters. Graffiti can be considered a contentious form of self-expression, and in discussion it often creates lively debate which can be polarising. However, it offers viewers insight into the role of sub-cultures engaged in resistant autonomous use of space.

Colour photography is dictated by the need to reflect how colour is part of the anonymous graffiti 'marking.' The project will be presented as a body of work in different outputs. I use social media as a tool for the curation of these images and have an Instagram page titled 'Identity Dump,' posting images here. My intention is to create a catalogue to be presented both as a print-based exhibition and as a zine. Social identity is never homogenous; individuals and groups have ways of dressing, accessorising, and speaking. These constitute a 'signature' that is part of socially constructed identity.

I am interested in capturing such expressions of self and social positioning (insider/outsider) through personal markings. This is often expressed through a shared sense of belonging and through collective expressions of agency through 'anti-social' actions. Through the process of 'walking in the city' and the adoption of a 'anthropological' or un-engaged viewpoint while taking these images, I am giving a new context to the markings, creating a catalogue, or index of autonomous self-assertions—"I was there and so were they." While I enjoy seeing the expression of self through this medium, I am also aware of negative reactions to graffiti. Social control by dominant groups is 'baked into' urban life. My intention is to highlight this dialogue of resistance and repression and create a conversation about the place of graffiti in the city.

Author

Deborah Marshall is a practicing photographer who teaches at Ara Institute of Canterbury, in Creative Industries. She did not start her creative journey straight out of school; she completed a Bachelor of Arts at the University of Canterbury majoring in Sociology, and went on to complete a Graduate Diploma in Social Work. Four children later and one mid-life crisis, she did not want to look back on her life and wish she had pursued photography, so found herself once again studying. Now she enjoys teaching in the creative space and continues to develop her creative practice.

Paper ID: E20

Retrieval-Augmented Generation (RAG) AI co-facilitation in postgraduate study: A position paper

Jan Hendrik Roodt (Otago Polytechnic)*; Samuel Mann (Otago Polytechnic)

Postgraduate research demands rigour, criticality, and independence at a time when generative artificial intelligence (AI) is transforming education. Retrieval-Augmented Generation (RAG) AI, when used as a supervised co-facilitator, offers a structured way to scaffold inquiry and enhance methodological rigour while preserving academic integrity. Evidence shows that while AI supports baseline cognition, RAG systems embedded in offline, pedagogically guided contexts extend benefits to higher-order thinking. Our position paper is derived from a structured literature synthesis of recent peer-reviewed studies exploring the impact of Retrieval-Augmented Generation (RAG) and related AI systems in postgraduate and professional practice education. The analysis identified convergent findings showing that sustained, supervised use of RAG AI can scaffold higher-order thinking and strengthen methodological reflexivity when embedded in ethically governed, offline contexts. Thus we argue for developing RAG AI co-facilitation capability as an ethical and strategic priority for professional practice doctorate programmes.

Position: Generative AI is now widely used in postgraduate education, but much of this use is ad hoc and unstructured. While efficiency gains are evident, uncritical adoption risks undermining rigour and scholarly independence. Mentoring in professional practice doctorates is distinguished by heutagogical approaches that foreground autonomy, reciprocity, and professional identity development. Effective mentors and facilitators combine judgement, intuition, compassion, and expertise within relationships of trust and critical friendship, enabling learners to navigate iterative, transdisciplinary, and practice-led research journeys. As a co-facilitator, Retrieval-Augmented Generation (RAG) AI can complement supervision, offering structured feedback, supporting inquiry processes, and enhancing reflexivity. By grounding outputs in curated sources, it provides a suitable foundation for postgraduate study.

Evidence from recent studies illustrates the potential. Essien et al. (2024) show measurable cognitive gains from ChatGPT use, but limited impact on higher-order skills. Researchbuddie demonstrates how multi-tool AI artefacts can scaffold systematic literature reviews. Mkansi and Mkalipi (2023) highlight the value of offline-capable AI systems for reflexive inquiry. Together, these examples show that postgraduate learners benefit most when AI support is structured and critical rather than incidental. Offline architectures are ethically significant. Renegado et al. (2025) show that hybrid AI systems with preloaded datasets ensure continuity while protecting privacy. For professional doctorates—where sensitive workplace and health data are common—offline RAG systems mitigate risks of leakage and align with institutional ethics. Wilder and Calderone (2025) and Eith and Zawada (2025) further demonstrate that generative AI can scaffold qualitative analysis and statistical training when embedded in guided pedagogical frameworks.

Professional doctorates demand that candidates not only conduct applied research but demonstrate methodological sophistication. Martin Andrew (2021) reminds us that rigour in this context is not simply a matter of quality assurance but arises through the interplay of criticality, reflectivity, and sustainability in super-complex environments. He further proposes that rigour converges with doctorateness—a threshold concept that ensures inquiry is both scholarly legitimate and professionally transformative. RAG AI, by grounding responses in curated sources and prompting reflective engagement, directly supports this expanded conception of rigour.

AI as a 'critical friend' strengthens postgraduate inquiry. Umer et al. (2025) report that RAG-enhanced models improved discussion quality in journal clubs. Maiti and Goel (2025) show that sustained AI use shifted students toward higher-order questioning. Feedback quality and integrity are also central. Cao et al. (2025) demonstrate iterative 'generation–evaluation–regeneration' cycles that enhance feedback usefulness. Pozdniakov et al. (2025) report student perceptions of helpfulness aligning with instructor evaluations. At the same time, Winberg et al. (2024) and Grichko et al. (2025) warn of over-reliance and stress transparency, AI literacy, and faculty oversight. Offline systems, as Golla (2024) argues, strengthen ethical safeguards by keeping sensitive data within institutional boundaries.

Implications: The proliferation of AI support systems for learners positions the adoption and development of RAG AI co-facilitation as a pedagogical and ethical necessity:

- Rigour: Grounded responses align with Andrew's principles of systematic engagement,
- Criticality: Sustained interaction fosters higher-order questioning and reflexivity,
- Ethics: Offline deployment protects privacy and academic integrity, and
- Scalability: Modular design ensures equitable access for dispersed cohorts.

These principles ensure that RAG AI enhances, rather than undermines, the scholarly development of practitioner-researchers.

Conclusion: Postgraduate education must move beyond unstructured AI adoption toward deliberate, co-facilitated RAG systems. When offline-capable and ethically embedded, RAG AI provides continuity, supports inquiry, and sustains integrity. Developing such systems is not merely technical enhancement but a strategic priority for professional doctorates, ensuring that future researchers engage critically, reflexively, and responsibly with both knowledge and technology.

Author
Henk Roodt is an academic mentor in the postgraduate and ILP space in CapableNZ. Henk has expertise and a research history in engineering, computing and tertiary teaching and learning, particularly in work-based learning contexts.

Paper ID: E21 (Creative Practice Presentation)

Languages of wearing: An interactive exhibition

Margo Barton (Otago Polytechnic)*; Martin Kean (Otago Polytechnic); Annette Cadogan (Otago Polytechnic); Pip Beaton (Otago Polytechnic)

This creative practice presentation is designed to encourage people to think about their engagement with fashion through wearing. Of our five senses, more often than not critiques and descriptions of fashion focus on sight, a viewer's point of view. The purpose of this interactive exhibition is to encourage participants to actively connect to the bodily experience of wearing. The Languages of Wearing interactive installation is part of the ongoing creative practices and research foci of the design team.

Previously one of the designers created Costume 14, 'The costume to face the world of the commonplace.' The piece was best understood through the wearers' feedback, comments and opinions; however human interaction with the exhibited piece was prohibited in the gallery setting .

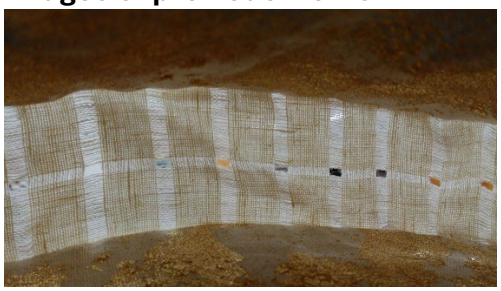
A series of public exhibitions also encouraged wearers to style themselves and reflect on the experience, revealing the joy of dressing up with no expectation to buy the fashions. In another installation participants were asked for feedback on their favourite clothes in their wardrobes. Powerful connections were uncovered between favourite fashions and family and friends, special events, and memories. Recently in Languages of Wearing, anonymous feedback was gathered from models during iD Dunedin Fashion Week.

In this Languages of Wearing exhibition, we invite visitors to interact with the specially designed challenging fashions. They can interact as they wish, by viewing or wearing, and furthermore, if desired, add their voices to the language of wearing by providing anonymous feedback.

We use "fashions" as the correct terminology here, as 'garments' may be unnecessarily specific, taking into account the many ways of wearing and many items to be worn, for example accessories such as hats.

We wish to make this survey of bodily experiences highly anonymous. What is being investigated here is the fashion, not the wearer. Therefore we will not seek to collect any biometric metadata from wearers, and we encourage participants to only engage with this survey anonymously. We understand that collected biometrics may form an interesting dataset in the future, but this is outside the scope of this proposed iteration.

Images of previous works



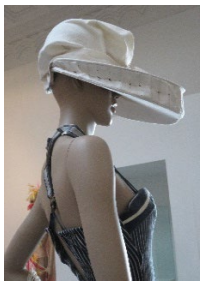



Image 1 wearer's view; and 2 & 3 exhibition attendee view. From Costume 14, 'The costume to face the world of the commonplace.' 2016 Intellectual Fashion Show, Gus Fisher Gallery, Auckland New Zealand.

Image 4. Citizen Stylist styling space, Dunedin, December 2016.



Image 5, 6, 7. Citizen Styled, participants dressing up, Dunedin 2018.

Author

Dr Margo Barton, Professor, Academic Leader for Fashion, Te Maru Pūmanawa, College of Creative Practice and Enterprise, teaches and supervises learners across a range of courses on the undergraduate and post graduate programmes in the School of Design.

A winner of the AKO Aotearoa Sustained Excellence in Tertiary Teaching Award (2007), she is passionate about fashion education and establishing networks within the global fashion industry to benefit design students, the fashion industry, and the wearer. Margo fosters international exchanges and collaborations for students and faculty, whether in person or by digital methods, and is a frequent exhibitor, curator, presenter, and external examiner across the wider area of fashion and design.

Margo is the Creative Director and Chair of iD Dunedin Fashion, including the iD International Emerging Designer Awards, is the founder of the Contemporary Fashion Practices online fashion symposium exhibition and is a board member of the International Foundation of Fashion Technology Institutes (IFFTI) and chair of the IFFTI membership committee.

She shows an ongoing commitment to expanding the definition of what 'fashion' is within learning and teaching at Otago Polytechnic, and to challenging and improving knowledge and interactions between emerging designers, the fashion industry, and potential wearers—within learning and teaching, and research.

Paper ID: E22

Research Community of Practice meeting: Art, design and creativity

Machiko Niimi (Otago Polytechnic)*; Margo Barton (Otago Polytechnic); Megan Brasell-Jones (Otago Polytechnic)

This is a new group Community of Practice, welcoming educators of all areas of Art, Design, Architecture, and Creativity. The intention of the meeting is to develop a special opportunity and space for the educators, practising and teaching in the above fields of creativity, to get together, connect with educators of similar subject matters, and reconnect with people with whom they may have previously crossed paths. Participants will be encouraged to share good practice, areas of challenges, and sow seeds for future collaborations and meetings. The meeting will be in an informal speed meet-up format.

Chair
Dr Machiko Niimi is a researcher and educator specialising in Human-Centred Design and Design for Sustainability, with a strong focus on community partnership projects and project-based learning. She has mentored students to success in national and international competitions, including the Best Awards, Audacious Startup Awards, and Map the System Canada. Machiko currently teaches Human-Centred Design, advanced Studio courses, and Honours/Postgraduate design papers.

Paper ID: E23

Designing for sustainability education and challenging climate fatigue

Machiko Niimi (Otago Polytechnic)*; Angus Lewry (Otago Polytechnic)

The context for teaching design for sustainability is changing quickly, alongside shifts in learners' knowledge base and attitudes in the area as they enter tertiary education. Many learners choose Product Design to directly address sustainability issues, arriving with vast knowledge and interest, but also facing risks of climate burnout, fatigue, and despair. These are issues to be highly aware of as educators.

In this presentation, we share reflections from our practice as educators teaching design for sustainability. Guided by environmental writer David Orr's reminder that "hope is a verb with its sleeves rolled up," we explore how project-based learning and active collaboration with our community can empower students to make tangible change and tackle feelings of burnout, fatigue, and despair.

Using Kolb's model of reflection, we examine our own teaching practice in a final-year Bachelor of Design studio course focused on environmental conservation. We reflect on project outcomes and ethical approaches to design practice and share unexpected nuggets of gold emerging in relation to learning around bi-cultural perspectives and the value of 'small is still good.' At the same time, we also identify challenges such as navigating the increasing politicisation of sustainability and belief system sensitivities.

Finally, we will outline our next steps to explore how student projects can move beyond concepts to tangible contributions with real-world impact. In doing so, we aim to strengthen reciprocal relationships with our community and deepen feelings of hope and fuel for further action in our learners.

Author

Dr Machiko Niimi is a researcher and educator specialising in Human-Centred Design and Design for Sustainability, with a strong focus on community partnership projects and project-based learning. She has mentored students to success in national and international competitions, including the Best Awards, Audacious Startup Awards, and Map the System Canada. Machiko currently teaches Human-Centred Design, advanced Studio courses, and Honours/Postgraduate design papers.

Paper ID: E24

Crafting the sonic experience: Audio roles within Adele's live sound design

Charlie Rodgers (Southern Institute of Technology)*

The aim of this research is to explore how live sound packages are designed and implemented for Adele's international performances, with a focus on the role of audio design in shaping the audience's experience. The study examines the design principles, equipment choices, and technical innovations that make it possible to deliver consistent, high-quality sound in large-scale venues across different parts of the world. The research is positioned within the wider context of live sound engineering education, where linking theory to real-world practice can be challenging. By analysing how Adele's production team collaborates with the artist to adapt sound systems to different venues while maintaining her creative vision, the project addresses the need for authentic case studies that connect students with industry practice. A qualitative approach was taken, using document and content analysis of publicly available production materials, technical documentation, and industry publications. This method enables a close examination of existing production workflows and system designs used throughout Adele's tours. Early findings highlight how collaboration between engineers and artists plays a central role in achieving a tailored sonic experience, while also showing the importance of adaptability when transferring designs between venues. This research contributes valuable insight to both academic and professional communities, offering practical teaching material that bridges theory and real-world application while strengthening the Southern Institute of Technology's connection with the live sound industry.

Author

Charlie Rodgers is a recording engineer, mixer, monitor engineer, educator, and researcher based in New Zealand. His career balances professional audio work with teaching at degree level, where he focuses on connecting classroom learning to the realities of the industry. As a monitor engineer, Charlie has toured internationally with the band L.A.B., covering the United States, Hawaii, Europe, Australia, and New Zealand. Working on these tours has given him valuable experience in delivering consistent, high-quality sound across a wide range of venues and environments. This role has also deepened his understanding of the creative and technical demands of live sound production, which he brings back into his teaching and research. Alongside touring, he works in recording and mixing, collaborating with artists across different genres. Charlie approaches every project with the aim of translating an artist's vision into a strong sonic experience, combining technical precision with creativity. His current research, 'Crafting the sonic experience: Audio roles within Adele's live sound design,' investigates how world-class sound design is developed and delivered in major touring environments. This project not only contributes to the academic field but also helps bring real-world case studies into the classroom, giving students practical examples of advanced concepts. Through his combined work, Charlie aims to keep his practice current, improve student outcomes, and strengthen the link between education and the professional audio industry.

Paper ID: E25

Design assessments for construction courses using AI

Rehan Masood (Otago Polytechnic)*; David Finnie (Otago Polytechnic); Sina Mualia (Otago Polytechnic); James Flanders (Otago Polytechnic)

Aim/objectives: This study explores the usability of AI tools in assessment design for the Level 7 Construction course Project Risk Management, utilising the guidelines outlined in the ConCOVE report, *AI-Generated Assessments for Vocational Education and Training*.

Context/relevance of the research/problem statement: Artificial intelligence has a multi-faceted impact on most professions through automation to execute simple to complex tasks. The effect varies for skilled professionals across different fields, specifically those involved in content design, development, analysis, and assessment. However, AI use is complementary, not a substitute for the skills. Hence, construction educators need to explore the usability of AI tools to assess the capability and capacity in course development and delivery. It is significant to address the risks of using AI tools, including ethical considerations, hallucinations, and privacy issues.

Methodology and method(s): AI tools were evaluated to identify the best fit for the study purpose. A comprehensive prompt engineering workflow was developed. The primary purpose of the assessment design is to cover the review task of relevant information, the analysis task for planning learning outcomes, assessment level, assessment structure, adult learner considerations, assessment criteria, and final review. Generated assessments were initially reviewed for language and then for relevance to the course. Later, the assessment was moderated internally and externally. After addressing the comments, the assessments were finally reviewed by the current student for any necessary modifications.

Indicative results: The most suitable AI tool was Claude Sonnet 4.5, which was found to be safe, accurate and secure. Information about the course, the learner, and the evaluation design was provided as a prompt, along with a good example of similar work. A detailed assessment was generated. The output was reviewed for relevance, moderated for consistency, and evaluated for its ability to address student needs. Several iterations were applied to reach the final version. Inclusion of real-life project documentation was suggested as a case project. Language was corrected, e.g. ‘would’ to ‘should.’ The relevance assessment was enhanced by introducing more contextual and regional information. Internal moderation shows that most components of the assessment are aligned with the learning outcome and the indicative content. External moderation confirms the industry currency of the content required from a recent graduate. Students interpreted the requirements to the full extent.

Significance and implications of the research: This study establishes the process and protocols to design the assessments for construction courses. In the next stage, assessment marking using AI tools will be explored.

Keywords:
Assessment design, Artificial Intelligence, risk management, construction education

Author

Dr Rehan Masood is a Senior Lecturer at the Department of Construction, College of Engineering, Construction and Living Sciences, Otago Polytechnic, Dunedin. With a prolific record of authoring 37 peer-reviewed journal articles, his contributions to the field have significantly advanced the understanding of construction practices but emphasised Prefabricated construction particularly. Boasting a rich professional background, he has five years of invaluable industry experience complemented by an impressive fourteen-year tenure as an educator in construction engineering and management. He upholds high standards as a profound review panelist of several impact-factor construction journals. His portfolio extends to research project supervision at both bachelor's and postgraduate levels, showcasing his dedication to nurturing the next generation of construction professionals. He also facilitates OP CapableNZ for construction and engineering-related qualifications. He is an active member of NZIOB, OffsiteNZ, and EngNZ. He is also a member of CIB Task Group W-121 (Offsite Construction). Rehan has lectured applied research topics to the University of Auckland, University of Waikato, Unitec, Otago Polytechnic, NASHNZ, and more.

Paper ID: E26

Auckland mass evacuation: Analysis of traffic demand management strategies

Mujaddad Afzal (Southern Institute of Technology)*; Prakash Ranjitkar (Southern Institute of Technology); Seosamh Costello (Southern Institute of Technology)

Urban mass evacuation under volcanic threat presents critical challenges, as sudden surges in traffic demand can cause severe congestion or even network-wide gridlock. This study aims to evaluate the effectiveness of different evacuation strategies and identify key factors influencing road network performance under a volcanic eruption scenario. A sensitivity-analysis-based traffic simulation framework is developed and applied to a central metropolitan area exposed to volcanic risk, examining both daytime and nighttime evacuation conditions. The analysis includes simultaneous and staged evacuation strategies, inter-regional, intra-regional, and combined trip distributions, and radial evacuation zones of 3 km, 5 km, 10 km, and 15 km.

Results reveal that traffic loading time, evacuation area size, and trip distribution significantly affect overall network efficiency. Moderate loading durations enhance evacuation performance by balancing flow and congestion, while nighttime scenarios outperform daytime evacuations due to lower background traffic volumes. Staged evacuation becomes more effective as the affected area expands, whereas intra-regional trip patterns consistently reduce clearance times and improve overall system stability.

These findings provide evidence-based guidance for emergency managers, demonstrating how tailored evacuation strategies—adapted to hazard scale, network capacity, and temporal conditions—can improve urban readiness for volcanic emergencies.

Author

Mujaddad Azfal is focused on "Mass Evacuation of Cities under Impending Natural Hazards" as a Ph.D. topic, using Auckland as a case study. His work will benefit the Civil Defence and Emergency Management (CDEM) and Auckland Council (AC) to better plan and manage the Auckland transportation network during volcanic unrest. His other research interests are project management, construction management, quality management, and roadway construction processes.

Paper ID: E27

Achieving United Nations Sustainable Development Goals (UN-SDGs) through prefabricated construction

Rehan Masood (Otago Polytechnic)*; Nicholas Kopschaninow (Otago Polytechnic); Nick Wilson (Otago Polytechnic); Nayani Landage (Otago Polytechnic); Bill Morrison (Otago Polytechnic)

Aim/objectives of the study: This study assesses the perceptions of practitioners about achieving sustainability through prefabricated construction.

Context/relevance of the research/problem statement: The world is heading for a major climate crisis, and the construction industry is a leading catalyst for this. The construction industry produces 9.4% of New Zealand's greenhouse gas emissions and 50% of its waste. Prefabricated construction has evolved over the decades to provide more sustainable solutions. There is limited empirical evidence, with a potential reason for the lack of reporting due to commercial sensitivity. However, it is viable to investigate the practitioners' perspective on the sustainability performance of prefabricated construction. It is significant to determine the extent to which prefabricated construction practices contribute to sustainability measures.

Methodology and method(s): This study follows a qualitative research approach. A semi-structured questionnaire was designed comprising 18 questions. To determine the sustainability, United Nations Sustainability Goals (17Nos) were considered, focusing only on SDG8, SDG9, SDG11, SDG12, and SDG13, as reported in relevant literature. The questions cover demographics, driving aspects and the goals. Members of OffsiteNZ were approached, but finally, only five interviews were conducted. The content of responses was analysed to identify the common trends and outliers.

Indicative results: The participants are fully involved in the prefabricated construction business and have more than five years of experience. Overall, participants had limited knowledge of UN-SDGs. Most participants believe UN-SDGs are not driving factors for sustainability. All participants agreed that SDG8 is entirely achievable. Most participants agreed that SDG9 is achievable. All participants, except one, agreed that SDG11 and SDG12 are achievable. It is concluded that all the identified SDGs are primarily achievable. Interestingly, sustainability is not the primary driver for prefabricated construction adoption, but the client demand. Participants agreed that prefabricated construction mitigates climate change.

Significance and implications of the research: This study demonstrates the potential of prefabricated construction for achieving sustainability.

Author
Dr Rehan Masood is a Senior Lecturer at the Department of Construction, College of Engineering, Construction and Living Sciences, Otago Polytechnic, Dunedin.

Awards

Best Paper in Conference Award

Suzy Hodgson
Ara Institute of Canterbury

Paper ID: 46
Building a “pracademic” research culture

Best Paper by a New and Emerging Researcher

Sara Vermuelen
Ara Institute of Canterbury

Paper ID: 176
AI-assisted gamification in nursing education: An autoethnographic exploration of escape rooms and board games in pharmacology teaching

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