



Creating Tomorrow

**HDR Research
Conference 2026**

Thursday 9 July 2026 | Mt Helen Campus



Acknowledgements

Federation University Australia acknowledges the Traditional Custodians of the lands and waters where our campuses, centres and field stations are located and we pay our respects to Elders past and present, and extend our respect to all Aboriginal and Torres Strait Islander and First Nations Peoples.

The Conference Committee would like to acknowledge and thank staff and HDR candidates who assisted with the organising of this event and contributed to the success of the conference.

Conference Committee

Professor Wendy Wright
Dr Robert Watson
Ms Lauren James

Keynote Speaker

Associate Professor Swapnali Gazula

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Professor Iven Mareels

Pro Vice-Chancellor, Research and Innovation and the
Institute of Innovation, Science and Sustainability

Every year at Federation University, the original and creative work performed by those that are being trained into the profession of research at the University, is being presented at the HDR Conference.

This conference is an expression of a rather recent tradition in the context of university education. Indeed, the first PhD was awarded in Australia only in 1948, and the MPhil came much later. Even, the PhD itself is a rather recent innovation in education. It was first introduced in 1810 at the University of Berlin, as an integral part of the modernisation of the university system in Germany at the time. From this initial innovation, the PhD concept developed rather quickly to become part of the modern university's education across the globe.

Doctoral degrees, as distinct from PhDs, can be traced back to the origin of the first universities, mid twelfth century. These Doctoral degrees were more about a license to teach (although not without research) rather than proven evidence of an original, creative contribution to human knowledge, which are the hall mark features of the modern PhD. Nevertheless, Doctoral degrees, based on research contributions, have been awarded in Australia since 1893. (See www.acgr.edu.au)

To all participants, thank you for supporting our HDR cohort, and learning more about the research that is being developed at Federation University. I commend the HDR conference to you all.



Professor Wendy Wright

Dean, Graduate Research

It is my great pleasure to warmly welcome all HDR candidates and supervisors to our 2026 HDR Conference.

Our conference theme this year is 'Creating tomorrow', which reflects the vital role that HDR candidates and supervisors play in shaping the future. Through their research, candidates generate new knowledge and insights that help address the challenges and opportunities of tomorrow. At the same time, their HDR studies help them develop the skills, confidence and capabilities to lead, collaborate, communicate and make a meaningful difference in the years ahead.

The Federation University HDR Conference is held each year, alternating between on-campus and online formats. In 2026, the conference will be held face-to-face, creating a wonderful opportunity for candidates and supervisors to come together in person, share ideas, celebrate achievements, network with colleagues, and build lasting relationships across the University. We are delighted to welcome all delegates and hope you enjoy the opportunity to connect, learn and be inspired by the breadth of research across our HDR community.

This year marks my tenth HDR Conference, and it remains a genuine highlight of the calendar for me. It is also a special occasion for the Graduate Research School team, who have worked with great care and dedication to bring the conference together. The annual HDR Conference is a wonderful celebration of the work, achievements and contributions of Higher Degree by Research candidates and their supervisors, and it is always a pleasure to see our research community come together in this way.

Welcome, and I hope you enjoy an inspiring and rewarding HDR Conference.



Professor Andrew Barton

Deputy Dean, Graduate Research

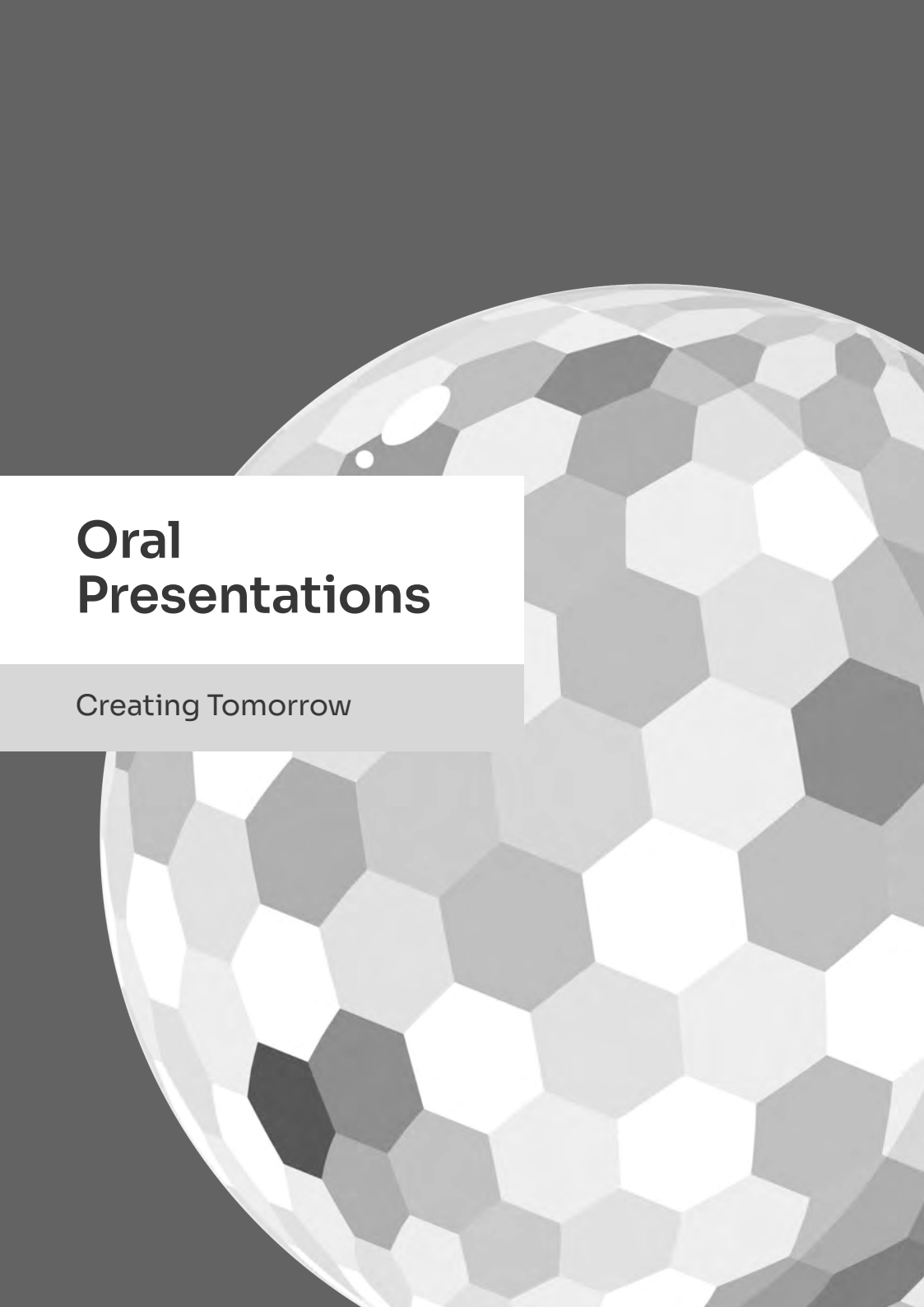
Welcome to the 2026 Higher Degree by Research (HDR) Conference. This important event brings together the HDR community to showcase research, celebrate progress, and share in each other's successes. Communicating our work is a fundamental element of research, and the ability to express complex ideas with clarity and insight is a skill that will serve you throughout your research journey and into your future career.

This year's theme, 'Creating Tomorrow', captures both the responsibility and the potential held by our research students. A research degree equips you with the skills to take responsibility for many of tomorrow's challenges, while also offering enormous potential to create positive change.

We will see presentations and posters from students addressing some of the most significant societal challenges of our time, including environmental issues, technological disruption, economic matters, and more.

The Graduate Research School is deeply committed to supporting your research training and success. We are pleased to provide this opportunity for you to engage, connect, and be inspired. I encourage you to take full advantage of the conference and to support those participating in the program. May what you hear and share inspire enthusiasm for your research and your broader professional endeavours.

Best of luck to all presenters and participants!



Oral Presentations

Creating Tomorrow



Transferability of externally validated polygenic risk prediction models for cardiovascular diseases scoping-review

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Doctor of Philosophy

The continued imbalance of diverse ancestry representation in genetic studies, including polygenic risk scores (PRS), has hampered the transferability and their role in precision medicine. We systematically evaluate the cross-population transferability and performance of existing externally validated PRS models for cardiovascular disease (CVD). We conducted a comprehensive systematic search of peer-reviewed, published papers across databases. We identified 16,968 records and included 52 CVD PRS prediction models. Of these, 40 studies reported PRS derivation with validation and 12 studies reported external validation. Most studies validated a PRS constructed using summary statistic data heavily derived from Europeans and trained in datasets with at least 75% European distribution. The majority, 82.2% (37/45), of externally validated models were derived from Europeans data. Among studies that externally validated European PRS, 27% (10/37) of those tested in non-Europeans and 64% (9/14) of those tested in Europeans demonstrated good discrimination ($AUC > 0.70$) and performed as well as or better than in the original derivation studies; the remaining models were overfitted on external validation. Despite progress, existing models lack transferability and validated models have limited discrimination performance. In addition, multi-ancestry CVD PRS studies with inclusion of large from underrepresented non-Europeans is critical to ensure equitable performance across diverse ancestries.

This research is support by a Regional Research Collaboration – THRIVE Project Stipend Scholarship and Fee-Offset Scholarship through Federation University Australia.



Factors influencing undergraduate nursing student's attitudes and experiences during mental health placements

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Supervisors: Professor Joanne Porter, Dr Bindu Joseph
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Doctor of Philosophy

Mental health clinical placements are essential yet challenging for nursing students with experiences and attitudes influencing confidence, competence and career interest. These placements provide opportunities to develop therapeutic communication skills and apply theoretical knowledge in diverse mental health settings however, students may also experience challenges such as stigma, anxiety and limited support that can negatively affect learning outcomes and perceptions of mental health nursing. Clinical placements are critical in ensuring graduates meet licensing standards and provide competent, compassionate care across healthcare settings. The preliminary aim was to review international nursing student's experiences of mental health clinical placements however, as no relevant reviews were identified the search was expanded to include all undergraduate nursing students.

A systematic approach was utilised with five databases searched initially up to October 2024 followed by analysis completed in January 2025. The search was updated in April 2026 with final analysis completed in May 2026. Twenty-one articles met the inclusion and exclusion criteria. Findings from this systematic review highlight the importance of enhanced pre-placement preparation, structured mentorship programs and systemic improvements within clinical learning environments. Fostering supportive and enriching placement experiences may better prepare nursing students for successful careers in mental health nursing.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



International nursing student's attitudes and experiences in Australian mental health clinical placements

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Doctor of Philosophy

International nursing student migration has increased due to a convergence of global nursing shortages, economic opportunities and access to education. In Australia, international nursing student migration became increasingly prominent in the early 2000s driven by significant nursing shortages particularly in rural and remote areas. Successful completion of clinical placements is a mandatory requirement for obtaining nursing registration in Australia. For international nursing students, mental health (MH) clinical placements may present unique challenges.

The aim of this research was to explore the key factors influencing international undergraduate nursing student's attitudes and experiences during MH clinical placements. International nursing students were defined as individuals who travelled from their home countries to pursue nursing education in Australia. Twenty-five international nursing students were interviewed and data were analysed using thematic analysis. Two broad themes were identified (1) anxiety about attending placement and (2) the pre preparation required for the placement. The findings confirm international undergraduate nursing student's concerns regarding MH clinical placements and highlight the importance of adequate preparation prior to placement commencement. Clear communication and appropriate pre-placement support may help facilitate a smoother transition into MH clinical placements.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Understanding interventions to reduce criminalisation for justice-involved young people — young people's perspective

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Supervisors: Associate Professor Marg Camilleri, Dr Alison Ollerenshaw and Dr Zeb Leonard

Doctor of Philosophy

Young people's voices are often missing from the discourse when analysing the impacts that interventions have on justice involved young people (Munford & Sanders, 2016; O'Reilly & Dogra, 2018). The aim of the research is to give a voice to young people's experiences by exploring their perspectives of justice interventions. This research investigates the experiences of young people and facilitators of justice programs to understand both perspectives of justice interventions.

This research design is underpinned by a constructionist approach. The theories applied comprise of critical criminology and social ecological theory which were used to inform our understanding of how the justice system responds to young people and the multiple contextual levels shaping young people's experiences. The methods included interviews, to elicit the lived experiences of young people. Juxtaposing these narratives were worker responses captured through a qualitative survey. Preliminary findings from this research show there is opportunity for further involvement from young people when determining the type and suitability of justice interventions. The outcome of this research hopes to provide meaningful insight into young people's perspectives, and how these perspectives can enhance justice interventions, to ensure that they are meaningful and reflect the needs of young people.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>]



Uncovering an ‘unconventional’ immune response to *Streptococcus pyogenes* infection

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Doctor of Philosophy

Streptococcus pyogenes (Strep A) is a bacterial infection that can be life-threatening for young children. Currently, there are limited prevention strategies, making it pertinent to explore the immune response to Strep A to identify ‘immune targets’ for future vaccines and therapies.

Humans have a specialised lineage of immune cells called unconventional T cells which mount rapid and potent responses against several pathogens. One cell type in this family are Vδ2 T cells, which were recently shown to respond to a strain of Strep A in a controlled human infection model.

Using *in vitro* stimulation assays and high-dimensional flow cytometry, we found that Vδ2 T cells respond to several Strep A strains that have been responsible for worldwide surges of infection. We explored age-related differences in Vδ2 T cells responses by using immune cells from adult, child and cord blood donors to assess if their response is a correlation to more severe infections in young children. Finally, we determined the activation mechanism of Vδ2 T cells during Strep A infection. Understanding how Vδ2 T cells respond to Strep A will help to identify immune mechanisms in this understudied disease that may help inform future vaccine and immunotherapy strategies.

This research is supported by a National Health and Medical Research Council (NHMRC) Ideas Grant Stipend, and an Australian Government Research Training Program (RTP) Fee-Offset Scholarship through Federation University Australia [DOI: <https://doi.org/10.82133/C42F-K220>].



Reclaiming narratives of feminism and resistance through textile-based art in the Goldfields

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Supervisors: Associate Professor Carole Wilson and Dr Jill Orr

Doctor of Philosophy

Deeply tied to Australia's democratic history, Ballarat is a place marked by the Eureka Rebellion, goldfields labour, institutional trauma, and ongoing struggles surrounding gender, power, and justice. These layered histories provide the foundation for this practice-led research project.

This body of research asks: How can a textile-based feminist art practice interrogate, reclaim and reinterpret the symbolism of the Eureka Flag and Ballarat goldfields as sites of women's resistance in Ballarat?

And also: How can re-engaging with the histories and materials of the Ballarat goldfields through practice-led research extend and materialise feminist historical revisioning into a nationally engaged contemporary textile art practice?

Through the development of textile works constructed from salvaged and repurposed materials, the research engages with the histories that have shaped this region. Drawing on feminist standpoint theory, material thinking and constructivism, the project reconsiders the symbolism of Eureka and the region through a feminist lens.

Emerging findings suggest that materially engaged textile practice can offer new ways of understanding contested histories, while contributing to contemporary discussions around feminism, regional identity, and practice-led research methodologies.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Urban morphology and the adaptable menagerie

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Master of Philosophy

Urban Morphology and the Adaptable Menagerie, explores the impacts of urbanisation on Australian animals. Utilising an artistic practice-based research method, Urban Morphology and the Adaptable Menagerie aims to invoke a biophilic response to the unveiling of the Anthropocene. At a time where we are facing the effects of climate change, waterway pollution, habitat loss and a decrease in humanistic empathy, this artistic practice-based investigation aims to foster and influence awareness of the human impact on the environment.

The investigation considers two research questions. How can the animal body evoke empathetic responses through surrealist morphology to communicate the impacts of urbanisation on animals? Can the concept of biophilia be generated through artwork?

To answer these questions, *Urban Morphology and the Adaptable Menagerie* investigates the practice of artists working within relevant themes and methodologies. Further examining the work of theorists, scientists, philosophers and historical sources.

The body of work is a developing collection of twelve sculptures, dubbed taximorphs, and twelve denim jackets, all to be set at a dining table. Each sculpture responds to the findings of a different scientific research study done on the represented species, or to observations of urban animals in the field.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Transposing the musical from Broadway to Bairnsdale — A practice based research study

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Doctor of Philosophy

This practice based study asks how an Australian context shapes my creative choices when using the form of the American integrated book musical to tell an Australian story.

The research investigates this question through the creation of a new musical, *Bright Orange Night*, including music, lyrics, and libretto. The project will result in two artefacts: a completed script and a piano/vocal score, accompanied by an autoethnographic exegesis enabling reflexive analysis of my creative practice and decision-making.

Through this process, Australian emotional grammar emerges as a key organising principle through which an Australian context is interpreted in practice. The specificity of this emotional grammar—and its divergence from American emotional grammar—is amplified within the integrated book musical form, which emphasises and externalises the emotion of character and situation through song.

Rather than asserting a total departure from conventions established by the American integrated book musical, the project articulates a recontextualised dramaturgical rationale for writing musicals that is attuned to Australian emotional expression, shaping when, how, and why characters transition into song.

In doing so, this research contributes a practice led framework for considering how culturally specific modes of emotional expression inform musical theatre structure and meaning within contemporary Australian musical theatre.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Hospital in the home versus inpatient care: Adults 65+ length of stay

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Doctor of Philosophy

Objectives: To examine length of stay (LOS) outcomes for older adults (65+) in regional Victoria, with a focus on differences between hospital in the home (HITH) and acute ward-based admissions.

Methods: A retrospective study of admissions using previously collected data from the Victorian Admitted Episodes Dataset (VAED), for patients aged 65+ years from four regional Victorian hospitals between 2022 and 2024 was conducted. Data extracted included admission type (Hospital in the Home vs acute ward-based), disease information, and patient demographics.

Results: Overall the study found that HITH admissions were associated with longer Length of Stay (LOS) compared to those treated in a general acute ward, however the results were very disease specific. Diseases of major complexity were associated with longer LOS and patients with more co-morbidities and increased age were associated with longer LOS overall.

Conclusion: This study emphasizes the important differences in LOS, when comparing HITH to acute ward-based hospital admissions. Disease type, severity and patient demographics had an influence on LOS. These findings underscore the role of HITH as a viable alternative to acute ward-based admissions and provide insights to guide health service planning, especially for ageing populations.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>]



AI-based terrain identification using proprioceptive sensing for autonomous wheeled robots

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Doctor of Philosophy (PhD)

Autonomous ground robots operating in outdoor and unstructured environments heavily rely on GPS, LiDAR, and vision-based sensors for navigation. However, the performance of these systems can degrade significantly under adverse weather and low-visibility conditions such as fog, dust, and darkness. Furthermore, active sensing technologies such as LiDAR and GPS may be unsuitable for defence-related applications due to detectable signal emissions and susceptibility to jamming. This research investigates the use of proprioceptive sensing, which refers to internal sensing modalities that measure the robot's physical interaction with the environment, including motor current and inertial measurement unit (IMU) signals, as a complementary support layer for terrain-aware navigation when conventional sensing systems become unreliable or restricted. Real-world terrain experiments were conducted across asphalt, short-grass, and long-grass environments under variable-speed and turning manoeuvres using the four-wheeled GUS robotic platform developed by Outlook Industries. A CNN-BiLSTM deep learning model trained using multichannel time-series motor current signals together with joystick operation commands achieved 97.9% terrain classification accuracy, with 100% accuracy on the evaluated unseen test dataset. The findings demonstrate the strong potential of proprioceptive sensing for terrain-aware autonomous navigation in operationally challenging environments.

This research is supported by CSIRO's Next Generation Artificial Intelligence Graduates Program (GA221787) funded by the Australian Government, an Outlook Industries stipend scholarship and by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>]. Artificial intelligence was used to support English language corrections.



Beyond hope: Investigating pre-service teacher's engagement with an emotional wellbeing framework

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Supervisors: Dr Sue Emmett and Dr Sara Weuffen

Doctor of Philosophy

Research says that early childhood teachers who are responsive to the needs of children are more likely to create environments where a sense of internal safety and more nurturing relationships are fostered.

For children under 8 years, relationship quality with their primary and secondary caregivers is crucial for brain development and their future mental health and relationships. However, relationally and emotionally sensitive teachers are often born, not made (unless engaging in self-development). My research examines how pre-service teacher's relational abilities may be developed through an emotional wellbeing framework via a practice-research project to build responsive teacher-child relationships.

In this presentation, I unpack the emerging results of my study including the following interconnected concepts: teacher's feelings of internal safety → teacher emotional wellbeing → quality teacher-child relationships → children's healthy emotional development. I will also share how pre-service teachers engaged with the framework by implementing evidence-based emotional wellbeing strategies.

My initial findings highlight that universities' need to prioritise pre-service teacher emotional wellbeing so they can better support young children's emotional development. If universities are better able to support such wellbeing capabilities, perhaps this will also provide an avenue for addressing the unprecedented burnout and attrition rate of Australian early childhood educators.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Agtech for transformation of Australian agriculture: Digital twins to manage natural resources, enhance productivity and sustainability in canola

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Doctor of Philosophy

The global agtech industry is valued at approximately \$700 billion, and the digital transformation of Australian agriculture has the potential to significantly increase agricultural productivity and economic growth. Emerging technologies such as the Internet of Things (IoT), artificial intelligence (AI), and machine learning (ML) are transforming modern farming by enabling data-driven decision-making for crop management, irrigation, pest control, and resource optimisation. IoT systems support real-time communication and monitoring in farming environments, while ML techniques analyse sensor data to improve productivity and sustainability. This presentation will highlight the development of a digital twin (DT) for a canola farm located in the Ararat region of Victoria, Australia. A digital twin is a virtual representation of a physical farming system that reflects real-world conditions and processes in real time. The developed DT integrates sensing technologies, AI, and ML to support real-time monitoring and decision-making. The system also incorporates AI agents and models designed to assist with plant growth, pest, and disease management. The resulting system provides a dynamic platform for monitoring, simulation, and decision support, thereby improving productivity, sustainability, and resilience in broadacre canola farming systems.

This research has been funded by the Australian Economic Accelerator (AEA) Ignite grant via a stipend scholarship through the Department of Education and tuition fee scholarship from Federation University.



The early childhood graduate teacher experience: A heuristic inquiry

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Supervisors: Dr Sue Emmett and Dr Cheryl Glowrey

Doctor of Philosophy

This research is an exploration of the essence of early childhood teaching from the perspective of graduate teachers. Aimed at attending to the increasingly urgent need for new approaches to early childhood teacher attraction and retention in Victoria, this research upholds subjective, lived experience as invaluable to a field in which efforts toward responding to problems within the teacher experience have proved insufficient.

In alignment with the tenants of heuristic inquiry as defined by Moustakas, both participants and researcher explore the phenomenon of teaching through their subjective knowing and reflections on the constitution of their experience. Participants engaged in artefact creation and semi structured interviews, the synthesis of which revealed recurring themes including isolation, fear and drowning; along with a series of 'glimmers' that served as fuel for teachers to persist amid challenge. What results is the illumination of understanding of the phenomenon presented by the researcher in the form of creative synthesis, alongside a wealth of qualitative data showcasing the lived experience of co-researchers for the benefit of the field of early childhood research.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Physics-informed and LSTM-based hybrid modelling for voltage prediction in PEM electrolyzers

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Doctor of Philosophy

Voltage modelling in Proton Exchange Membrane (PEM) electrolyzers is difficult because their operating behaviour is nonlinear and varies with time. Nevertheless, accurate voltage prediction is important for assessing performance, forecasting future behaviour, and supporting predictive maintenance. This study investigates Physics-Informed Neural Networks (PINNs), Long Short-Term Memory (LSTM), and a hybrid PINNs-LSTM ensemble model for predicting cell voltage in both multi-cell and single-cell PEM electrolyser systems. The multi-cell dataset contained 16 operating variables, while the single-cell dataset included 14 variables.

For the multi-cell PEM electrolyser, the hybrid PINNs-LSTM model produced the highest prediction accuracy, with an MAE of 0.3022 and an R^2 of 0.9868. For the single-cell PEM electrolyser, the LSTM model achieved the best result, with an MAE of 0.1568 and an R^2 of 0.7457. The findings suggest that LSTM is effective in capturing nonlinear voltage trends, whereas PINNs enhance the physical reliability of predictions by embedding electrochemical knowledge. Overall, the study confirms the usefulness of integrating data-driven and physics-informed methods for voltage prediction and degradation analysis in PEM electrolyzers.

This research is supported by a Tuition Fee Scholarship through Federation University Australia.



Youth group near-peer mentoring in the transition from school to work or study in rural and regional areas in Victoria

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Master of Philosophy

Young people in rural and regional Australia face distinct structural and place based challenges when transitioning from secondary school into further education, training, or employment. Geographic isolation, limited local opportunities, and the likelihood of relocation shape post school decision making and contribute to persistent inequities in educational and employment outcomes. Near peer mentoring has been identified as a promising, strengths based approach to support young people during this transition; however, there is limited empirical evidence examining its effectiveness within rural Year 12 contexts in Australia.

The aim of this research is to examine how participation in a rural, youth led near peer mentoring program influences Year 12 students' transition readiness, decision making confidence, and pathway clarity. The study is embedded within YouThrive Victoria's Branch Out Mentoring program, which combines group based workshops with near peer mentoring delivered in rural and regional secondary schools.

Guided by Social Cognitive Career Theory, Career Construction Theory, and youth mentoring theory, the study employs a sequential mixed methods design. Pre and post program surveys will be completed by approximately 100 students, followed by semi structured interviews with a subsample of participants. Quantitative data examine short term shifts in confidence and clarity, while qualitative findings explore how mentoring relationships and place shape young people's post school planning. Findings will contribute context specific evidence to mentoring and youth transition research and inform place aware intervention design.

This research is supported by The Rural Foundation Co-Op Stipend Scholarship and by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Understanding the use of generative AI by higher education students for cognitive development: A longitudinal qualitative study

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Doctor of Philosophy

Generative AI (GenAI) has increasingly been used by higher education (HE) students for academic support, personalised learning, and improvements in short-term academic performance. However, the broader purpose of HE extends beyond efficiency gains to the development of cognitive abilities such as critical thinking, creativity, and reflective learning practices. Existing research has largely focused on the functional benefits of GenAI use, offering a limited understanding of how sustained engagement with GenAI influences deeper cognitive development. Addressing this gap, this study investigated how HE students' learning with GenAI evolved from instrumental use to more reflective forms. Guided by Organisational Learning Theory (OLT), the study explored how students' engagement with GenAI progressed from single-loop learning to double and triple-loop learning. A longitudinal qualitative research design was employed, involving semi-structured interviews with 20 HE students conducted across four phases over a 15-month period. This approach enabled the capture of changes in students' learning practices, perceptions, and ethical reasoning related to GenAI. The findings indicated that students initially used GenAI instrumentally, primarily to complete academic tasks. Over time, many participants demonstrated increased awareness of limitations and ethical implications, and deeper reflection on how GenAI shaped their learning processes. These changes were associated with enhanced self-directed learning, reflective judgment, and ethical awareness, indicating progression toward double- and triple-loop learning. The study provides a novel OLT-informed framework for understanding GenAI-supported learning in HE students by highlighting the pedagogical implications for fostering deeper, reflective, and ethically informed student engagement with GenAI.



The impact of explicitly teaching the ‘language of science’ on learning outcomes

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Doctor of Philosophy

Many students enter secondary science without the scientific language proficiency needed to understand, communicate, and reason about scientific concepts. Difficulties with scientific vocabulary, multimodal representations, and discipline-specific discourse can limit students’ confidence, engagement, and achievement. These challenges contribute to broader concerns about declining scientific and technical literacy, which are linked to reduced participation in STEM pathways and long-term academic outcomes (Darling-Hammond et al., 2020; Tang & Williams, 2019). As scientific knowledge is constructed and communicated through specialised language, limited access to this language restricts students’ meaningful participation in science learning (Hernandez & Schleppegrell, 2021).

This project investigates the impact of explicitly teaching the ‘language of science’ on Year 7 students’ scientific literacy and engagement. It responds to the need to address literacy-related barriers that hinder students’ ability to interpret data, apply scientific reasoning, and communicate understanding. Focusing on explicit instruction in scientific vocabulary, multimodal scientific literacy, and scientific discourse, collectively referred to as the ‘language of science’. The study seeks to identify practical, classroom-based strategies to enhance access to science learning for diverse learners. The research aims to strengthen scientific proficiency, promote equitable learning opportunities, and support sustained engagement in science and future STEM pathways (OECD, 2021).

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Exploring effective community partnerships for immigrant parents of children with autism

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Doctor of Philosophy

South Asian (SA) immigrant families raising autistic children in Australia face multiple challenges, including navigating the National Disability Insurance Scheme (NDIS), cultural stigma around disability, and language barriers due to service systems that lack community-specific support. Despite a 16% rise in CALD autism participants within the NDIS between 2022 and 2023, there remains a critical gap in evidence about what community partnerships work for these families, and why. This study investigates how effective and sustainable community partnerships can be developed to support SA immigrant parents of children with autism spectrum disorder (ASD) in Australia. Using a mixed-methods design, data will be collected from 15–20 parents, 8–10 community leaders, 8–10 service providers, and 80–120 survey respondents over 18 months, through semi-structured interviews, focus groups, digital platform analysis, and structured surveys. The study applies an integrated theoretical framework combining intersectionality theory, ecological systems theory, and community partnership theory to examine cultural, structural, relational, and socioeconomic factors shaping partnership formation and sustainability. Findings will contribute an evidence-based community partnership framework for culturally responsive disability support, advancing theory and practice in disability services, multicultural policy, and family empowerment.

This research is supported by the Commonwealth through an Australian Government Research Training Program (RTP) Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Attending differently: A practice-based researcher's experience in the archive

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Master of Philosophy

Practice-based research is a well-established methodology enabling artists to contribute original knowledge through creative practice alongside traditional scholarly inquiry. Artists regularly encounter archives, but what the practice-based researcher brings to that encounter, and what it enables them to perceive, is less often examined.

This presentation draws on two days of archival research in Tasmania, as part of a Masters by Research. Examining original sketchbooks by Louisa Anne Meredith (1812–1895), a settler-colonial artist and author who settled in Tasmania from 1840, the presenter perceived a range of insights and previously unnoticed connections, enabled by her working knowledge as a visual artist.

Handling both intact sketchbooks and those that had been disassembled and stored separately in solander boxes elicited different qualities of access that may have been missed by scholars in other disciplines studying Meredith. This presentation examines that quality of access, one closer to what Paul Carter calls eidetic history, attending to what the archive cannot represent but which an artist can imagine into. Together, these experiences reveal how practice-based research can bring new perspectives on female artists in the archive.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Navigating multiple ethics applications to access health professional participants: Lessons learned

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Doctor of Philosophy

Survey research is increasingly difficult due to widespread survey fatigue and declining response rates. This PhD project aimed to recruit emergency department nurses in Victorian to participate in an online survey and follow up interview. Initial recruitment, via electronic mailouts and emails distribution through two professional organisations, yielded fewer than 50 responses. Consequently, the recruitment strategy was revised, with amended HREC approval, to enable direct access to nurses through emergency departments.

Research governance officers at hospitals across Victoria were contacted to seek permission to advertise the study, however, many did not accept university HREC approval. To recruit nurses directly, the team had to obtain either separate ethical approval from each hospital or a 'blanket' approval obtained through the National Mutual Acceptance (NMA) process, established to streamline multi site research. The NMA process requires submission of an ethics application to one of eight principal sites, plus a Principal Investigator and site specific application for each additional site. Although NMA reduces the need for multiple full HREC applications, substantial time and administrative effort are still required. When planning PhD recruitment, researchers should anticipate low survey response rates, plan multiple distribution methods, and allow at least six months for NMA and site-specific approvals.

This research is supported by an Australian Government Research Training Program (RTP) Fee-offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>] through Federation University Australia. I used VAL (RMIT, 2026) to obtain suggestions for improvements in spelling, grammar and expression.



Role of AI in local government records and archives management

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Doctor of Philosophy

AI is a fast-changing landscape which influences everyone's daily life in various way and differing degrees. But for local government councils based in Victoria, AI can bring both benefits in undertaking some of the repetitive and mundane tasks, while also bringing governance issues on how it should be managed. In my PhD which this presentation is based on, I will be examining three council departments (records management, planning and building) as to where AI could play a role in assisting staff in their day-to-day workflow. This will then be referenced with both external legislation and policies that have implications on records management, along with internal governance protocols. This presentation will be using some examples from a council planning department and their role in assessing planning applications and how the workflow could be assisted by AI. I will also discuss some preliminary findings as to the use of AI that I have found in my research so far while using Ararat Rural City Council as a case study.

This research is supported by an Ararat Rural City Council Archives Management and UniTown Co-Op Stipend Scholarship and by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Reimagining herd grouping through data-driven multivariate nutritional profiling of dairy cows

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Doctor of Philosophy

Pasture-based dairy systems depend on effective nutritional management to maximise milk production and feed efficiency. Conventional cow grouping strategies commonly rely on individual criteria such as parity, days in milk, or milk yield, which may not adequately capture the multidimensional nature of nutritional demand. This study developed a data-driven multivariate profiling approach to identify nutritionally homogeneous groups of dairy cows. Data from 120 cows of varying parity at Ellinbank SmartFarm, Victoria, were extracted from the DeLaval DelPro farm management platform, including milk yield, milk fat, protein and lactose concentrations, body condition score (BCS), body weight (BW), and days in milk (DIM). Net energy for lactation and metabolisable protein requirements were calculated and integrated with production and physiological variables. Following Z-score standardisation, principal component analysis was used for dimensionality reduction, and k-means clustering was applied to classify cows. Multivariate analysis of variance confirmed highly significant differences among clusters ($p < 0.05$). Univariate analyses showed strong separation for total milk yield ($p = 2.10 \times 10^{-294}$), BW ($p = 1.60 \times 10^{-233}$), BCS ($p = 2.37 \times 10^{-126}$), milk fat ($p = 2.70 \times 10^{-47}$), protein ($p = 4.19 \times 10^{-27}$), and lactose ($p = 8.89 \times 10^{-29}$). The proposed approach provides a robust framework for precision nutritional grouping and targeted feeding management in pasture-based dairy systems.

This research is supported by an Agriculture Victoria Research (Ellinbank SmartFarm) Co-Op Stipend and Tuition Fee Scholarship with Federation University Australia.



Navigating employability capital and professional identity among NNESB TESOL graduates in Australia

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Doctor of Philosophy

International TESOL graduates in Australia, particularly those from non-native English-speaking backgrounds (NNESB), often face challenges when transitioning into relevant professional roles. These challenges persist despite strong linguistic, academic, and intercultural competences. Instead, they are shaped by unclear career pathways and limited access to local professional experience, which constrain graduates' ability to position themselves in the labour market. The aim of this research is to investigate how NNESB TESOL graduates navigate employability and construct their professional identity within the Australian context. The project conceptually integrates Bourdieu's sociological theory with Tomlinson's employability capital framework. Adopting a mixed-methods design, the study combines quantitative analysis of structural patterns and inequalities with qualitative exploration of graduates' lived experiences, meaning-making, and strategies across macro-, meso-, and micro-level contexts. The findings have implications for TESOL program design, particularly in strengthening work-integrated learning, mentoring, and professional identity development. More broadly, the research challenges deficit perspectives and supports more inclusive approaches to graduate employability.



Interventions to reduce gambling harm in ADHD and autistic adults

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Doctor of Philosophy

Preliminary research has found that autistic or Attention-Deficit Hyperactivity Disorder (ADHD) adults may have a higher susceptibility to experiencing harm from gambling than their neurotypical counterparts (Vintró-Alcaraz et al., 2024). The rising indication of a population at risk highlights a need for specific, targeted and accessible intervention strategies to address gambling harm. Fatséas et al. (2016) found that early intervention is the most effective way of reducing addiction-related harm in neurodiverse people. Gambling harm is not addressed by the current Australian National Preventive Health Strategy 2021-2030, nor the higher risk of those with ADHD or autism participating in gambling in any major public health strategies globally. Therefore, this research aims to provide recommendations for the future implementation of more effective, accessible and neurodiversity affirming harm reduction, prevention and intervention strategies. This presentation will provide an overview of the 3 projects making up the PhD thesis – the systematic review of prevalence, umbrella review of gambling harm intervention strategies, and a Delphi study gaining consensus on the most accessible interventions for neurodivergent populations experiencing gambling harm.

This research is supported by the Department of Health and by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Unleashing digital financial resilience: A global index for ranking nations and shaping policy

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Doctor of Philosophy

This study develops and validates the Digital Financial Resilience Index (DFRI), a novel global composite measure integrating digital financial literacy (DFL), digital financial inclusion (DFI), and digital financial resilience (DFR) across 159 economies between 2014 and 2024. The research addresses an important measurement gap: while prior literature has examined literacy, inclusion, and resilience separately, no standardised global index has combined these dimensions within a single analytical framework. The study is grounded in a capability-resilience framework underpinned by critical realism, which conceptualises DFL, DFI, and DFR as theoretically distinct but sequentially related constructs. Using seven Global Findex indicators, the index is constructed through principal component analysis for the DFI and DFR dimensions and combined using equal weighting.

Results indicate strong psychometric performance for DFI and acceptable performance for DFR, with robustness checks showing stable rankings across alternative specifications. Regression and mediation analyses support a sequential pathway in which DFL predicts DFI and DFI predicts DFR, with DFI fully mediating the effect of literacy on resilience. Income-group analysis further reveals a U-shaped pattern in the inclusion-resilience relationship, with the strongest effects in low- and high-income economies. The DFRI contributes a scalable tool for comparative research, global benchmarking, and evidence-based policy targeting in support of SDG 8.10.



How Victoria Police navigate family violence incidents involving mental illness

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Doctor of Philosophy

Royal Commissions into Victoria's mental health system and family violence have highlighted the growing prevalence and complexity of these contemporary issues within the Victorian community. While these challenges place significant demands on frontline Victoria Police members, who are often required to respond to and manage such incidents, contextually, there are growing concerns about the misidentification of respondents. Despite the critical nature of this role, there is limited understanding in the literature of how police navigate these complex situations, revealing a significant gap in existing research.

The research question of how Victoria police members navigate FV incidents in regional Western Victoria, where one or more of the persons involved is experiencing mental illness (MI), will be unpacked by obtaining first-hand narratives from police, FV practitioners and community mental health clinicians. The research methodology adopts an Interpretive Phenomenological Analysis (IPA) framework to interpret personal accounts, explore meaning and understand the construction of thoughts, ideas, and concepts. The project aims to contextualise the police response using theoretical perspectives, including critical criminology and discretionary decision-making. The outcomes of this project seek to promote broader collaborative efforts supporting both regional FV and mental health services and individuals with a lived experience of mental illness.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Patient perspectives of transition of care services in Australia: A quantitative study

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Doctor of Philosophy

Background: The transition home after hospital discharge is critical, particularly for older patients with heart failure, who have high readmission rates.

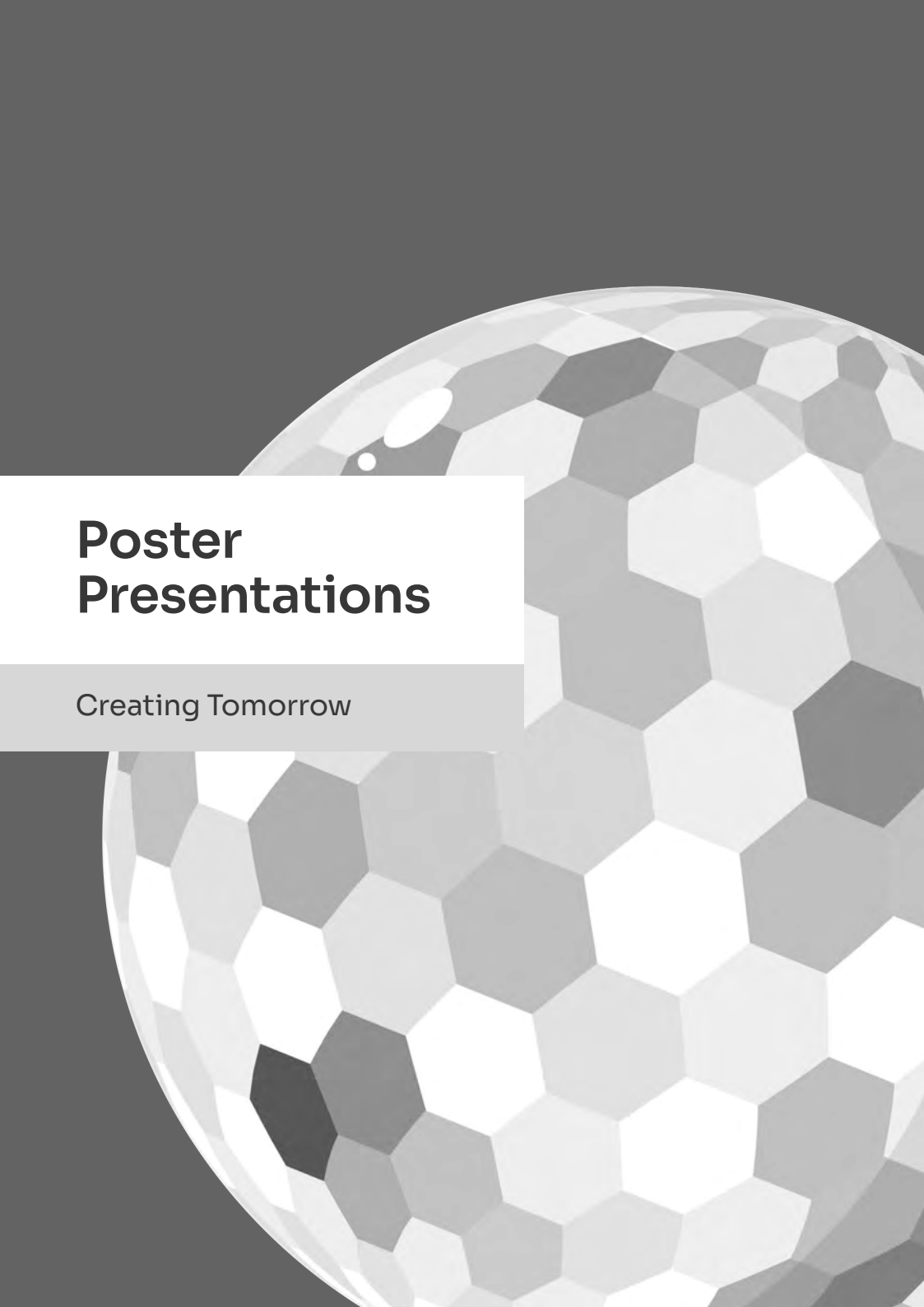
Aim: This study assesses the quality of transition-of-care services for older patients with heart failure in Australia and identifies areas for improvement.

Method: A quantitative study was conducted using the Care Transition Measure (CTM-15) with participants aged 60 and older who were discharged within 30 days. Data were collected from Austin Health, a major regional hospital, and local GP clinics in Victoria, and analysed using descriptive and inferential statistics.

Results: Of the 130 participants, 52.3% were male, 77.7% were 70 or older, and 63.8% lived in regional areas; the majority spoke English as their first language (69.2%). The CTM-15 showed a reliability coefficient of 0.8 and an unsatisfactory score of 48.28. The highest score was in "Secured Preferences" (50.51) and the lowest in "Preparation for Self-Management" (46.37).

Conclusion and implications: Low satisfaction scores signal a need for further research to uncover underlying issues. Future studies should explore patient perspectives on self-management challenges. Interventions to improve self-management through education, digital tools, and coaching are necessary.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Poster Presentations

Creating Tomorrow



Digging deeper into the late-stage development of V γ 9V δ 2 T cells

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Doctor of Philosophy

The human immune system contains a variety of cell lineages with distinct roles. One of these, V γ 9V δ 2 T cells, are becoming an attractive target for immunotherapies because of their versatility in recognising and responding to various infections and cancers. However, their development pathway in healthy humans is not well defined.

Our group recently discovered a 3-stage pathway of V γ 9V δ 2 T cell development in the healthy human thymus, the organ in which T cells develop, before being released into the bloodstream. RNA-sequencing of each developmental stage identified a series of differentially expressed genes (DEGs) that suggested further heterogeneity.

In this project, we drilled down further into the development process with a focus on late-stage changes after the V γ 9V δ 2 T cells have been exported from the thymus. Cells from human paediatric thymus, cord blood and adult blood were stimulated in short and long assays and measured for proliferation, activation and cytokine markers to uncover functionally distinct subsets within the 3 developmental stages that had been previously identified.

Further definition of V δ 2 T cell development in healthy humans could help to understand the cause of deficiencies and defects, and act as a blueprint for targeted immunotherapies.

This research supported by a National Health and Medical Research Council (NHMRC) Ideas Grant Stipend, and an Australian Government Research Training Program (RTP) Fee-Offset Scholarship through Federation University Australia [DOI: <https://doi.org/10.82133/C42F-K220>].



Grandparenting experiences of later-life Chinese immigrants in regional Victoria

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Doctor of Philosophy

In Chinese culture, families play the main role as welfare providers, especially for the elderly and young. Adult children are culturally expected and legally responsible to care for their older parents. In turn, older parents often feel obligated to help with childcare so their children can focus on their careers. These practices continue when adult children emigrate. Many older adults move to popular host countries, including Australia, to join their adult children. The current literature suggests that later-life immigration is motivated by family reunion and that older immigrants' experiences are largely shaped by intergenerational relationships and community engagement. However, while these studies discuss intergenerational dynamics broadly, there is limited understanding of how grandparenting is specifically experienced by older Chinese immigrants in regional Australia. The literature provides little insight into how the unique social and geographic factors of regional settings shape grandparenting experiences. This project specifically aims to bridge these gaps. Using Interpretative Phenomenological Analysis, the study will examine how these immigrants make sense of grandparenting in regional Victoria, where they move later in life. It will enhance the field by providing detailed insights into the complexity and nuances of this phenomenon.



Registered nurses' perceptions of factors contributing to effective leadership in acute care settings

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Doctor of Philosophy

Background: Understanding registered nurses' perceptions of factors that contribute to effective leadership is essential for strengthening workforce outcomes and healthcare quality. Leadership within nursing remains complex, influenced by interpersonal, organisational, and contextual factors.

Aim: To explore evidence on registered nurses' perceptions of the key factors contributing to effective leadership in acute healthcare settings.

Methods: A systematic review of literature was conducted through databases CINAHL Ultimate, Medline, Scopus, PsychINFO and Web of Science. The review was conducted in Covidence following PRISMA guidelines, with structured searching, screening using eligibility criteria, and selection of studies by a team of researchers. Included studies will be analysed, themes created and submitted for publication.

Results: Currently being analysed and themed. Key results and factors to be finalised prior to conference.

Conclusion: From the perspective of registered nurses, effective leadership is relational, supportive, and context dependent. Investment in structured leadership development programs, mentorship, and positive organisational cultures is critical to enhancing leadership capacity and sustaining the nursing workforce.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



The litter bird-en: Using imagery to investigate bird-litter interactions in Australia

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Doctor of Philosophy

Anthropogenic litter poses a significant global threat to birds which are well-known to interact with litter. Targeted action to reduce the risk of anthropogenic litter on birds is needed, however before that can be achieved it is essential to first investigate how birds are interacting with litter and understand which species and litter characteristics are involved. We set out to gain a baseline understanding of bird-litter interactions occurring in Australia, through a citizen-science based image collection study. We analysed 272 images of 65 bird species from across Australia. We found that in addition to ingestion, entanglement, and use of litter as nesting material, Australian bird species are interacting with litter in other ways such as capture and handling, use of litter to attract mates, perching, and distraction displays, thus revealing a broader range of interactions than previously anticipated. While plastic was the most common litter type recorded, we found some patterns between interactions, bird species, and litter characteristics. Insights from this study provide management organisations with the first step to developing targeted strategies that mitigate the risks of anthropogenic litter to birdlife.

Acknowledgement: We would like to acknowledge the Traditional Custodians of the land and waters which this study was conducted on and from where images were collected.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>]. This research is also supported by a stipend scholarship provided by the Department of Energy, Environment, and Climate Action (DEECA), and Federation University. The authors declare no known competing financial interests or personal relationships that could have appeared to influence this study.



Mapping social determinants of health: Exploring the position of migrants and refugees

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Doctor of Philosophy

Amidst rising migrant mobility, inequity risks tied to social determinants face intense scrutiny, making this research timely and relevant. Evaluating this scholarly landscape is vital to map the field, identify gaps, and advocate for migrant and refugee health needs aligned with Sustainable Development Goals. This bibliometric study evaluated 13,264 records retrieved from Scopus and Web of Science. Following duplication removal, exclusion filtering, and title and abstract screening, 4,005 records published between 1973 and 2025, were analysed. RStudio and VOSviewer software mapped publication trends, typologies, geographical distribution, collaboration networks, institutional and journal contributions, alongside the thematic evolution of the field.

Results revealed a rapidly expanding field. Publication volumes surged by 52% during 2020–2025. Articles and reviews comprised 95.08% of the literature, with the United States, United Kingdom, Canada, and Australia emerging as leading geographic contributors. Notably, the thematic structure transitioned from earlier emphases on acculturation, culture, and health behaviour towards contemporary priorities of health equity, mental health, healthcare access, intersectionality, and social determinants of health. Practical implications of this study include opportunities for scholars, policymakers, and practitioners alike, emphasizing the necessity of more context-specific, community-focused, and intersectional research paradigms to strengthen health education and service access for migrants and refugees.



Intersectional identities and pedagogy: Experiences of South Asian women educators

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Doctor of Philosophy

This research examines how intersectional identities shape the professional and pedagogical experiences of South Asian women educators in Victorian schools. While schools in Australia are becoming increasingly diverse, limited research has explored how gender, ethnicity, language, and migration histories influence the experiences of multicultural women educators within institutional settings. Existing literature often focuses on student diversity, with comparatively less attention given to teachers lived experiences and professional identities. Drawing on an intersectional framework, this qualitative project explores how South Asian women educators negotiate identity, belonging, and professional expectations within school environments. The research will involve semi-structured interviews with approximately 20 South Asian women educators working in Victorian schools. Data will be analysed thematically to examine how institutional structures, cultural expectations, and personal experiences influence educators' teaching practices and professional roles. The study posits that educators lived experiences are intrinsically connected to their pedagogical approaches and their ability to foster inclusive learning environments. By centring the voices of South Asian women educators, this research contributes to discussions on teacher identity, educational equity, and culturally responsive pedagogy. The findings aim to provide insights for teacher education, leadership, and inclusive educational policy and practice.

This research is supported by the Commonwealth through an Australian Government Research Training Program Stipend and Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



South-eastern Australian drought, multi-decadal variability and dryness since the Little Ice Age

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Doctor of Philosophy

South-eastern Australia (SEA) has experienced a drier, warmer climate since the late 1990s. Initially the Millennium Drought (MD) occurred from 1997-2009, however lower rainfall, reduced water resources and higher drought frequency have continued despite occasional wet years. At a regional level the MD is one of the longest in recent centuries, along with the Federation (1895-1902) and World War II (1936-1945) droughts, which both occurred during a drier fifty year period in SEA.

Multi-decadal periods of higher or lower mean annual rainfall have been prominent in SEA since the cessation of a cooler, wetter multi-centennial period known as the Little Ice Age (LIA) in the mid 19th century. Since then greater aridity has prevailed in SEA including the West Central region of Victoria, with a desiccation of aquatic environments and long term fall in crater lake levels. This demonstrates how persistently drier conditions can have significant longer term hydrological implications.

The meteorological context of the drier post LIA hydro-climate has not been closely examined in West Central Victoria, although there appears to be strong evidence in paleoclimatic and instrumental findings that quasi-decadal drought incidence has varied with the prevalence of wetter or drier climates in SEA during recent centuries.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Parenting and health: Uncovering disparities regarding health of parents of autistic children

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Supervisors: Distinguished Professor Colette Browning, Distinguished Professor Shane Thomas, Dr Huy Nguyen and Dr Amanda Young

Doctor of Philosophy

Existing evidence suggests mothers of Autistic individuals experience reduced life expectancy, potentially linked to chronic health morbidities. This study aims to compare health outcomes among parents of Autistic children, parents of non-Autistic children, and parents of children with other conditions, and to identify parental preferences for supports and services that may improve their health and quality of life. Methods include a systematic review of four key health conditions in parents of Autistic children, an anonymous online survey assessing health conditions in parents and children, and interviews with parents and health professionals using a modified Delphi approach. Preliminary findings indicate substantial research on parental stress and mental health, but limited evidence regarding physical health conditions among parents of Autistic children. This is the first study to examine physical health outcomes, alongside parent-identified support needs. Limitations include reliance on self-reported health data; future studies could incorporate objective measures such as biomarkers. Results may inform advocacy and policy recommendations for accessible, family-centred supports for Autistic individuals and their families.

This research is supported by a Regional Research Collaboration – THRIVE Stipend scholarship and by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



DisArcadia: Why Australians choose magnificent failure over dangerous truth

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Doctor of Philosophy

Australia has always chosen magnificent failure over dangerous truth: the swagman over the shearer, Burke and Wills over Sturt, Gallipoli over Beersheba. This thesis asks why.

The answer begins with what was already here. For over sixty thousand years, Terraglossia (Dank 2025): a system of kinship, ecology, and governance that managed Country into abundance. Admitting its existence meant acknowledging whose country this really is. Settler colonialism installed a perceptual apparatus that made it invisible, converting kinship management into “natural abundance” and producing terra nullius.

What followed was self-reinforcing. DisArcadia operates through double appropriation: first destroying Indigenous Arcadia, then stealing its qualities — bush knowledge, resilience, mateship — and inverting them into the Battler mentality. A coherent national identity built without reckoning with its foundations.

The thesis traces this spiral through five case studies — Burke and Wills, Eureka, Ned Kelly, Gallipoli, and Waltzing Matilda — and proposes a unified framework for why Australia keeps choosing magnificent failure. Because facing dangerous truth would mean acknowledging whose country this really is.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Examining sustainable HR practices – employer branding perspectives

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Graduate Certificate in Research

Employer branding now is a key part of contemporary human resource management, yet its relationship with sustainable HR practices remains underexplored in developing economies. Existing research is largely based on Western and East Asian contexts and focuses mainly on highly visible organisations with established sustainability agendas. In Sri Lanka, low visibility industries such as manufacturing, logistics, and back-office services remain under researched, despite their importance to the workforce.

This study examines how sustainable HR practices shape employer branding from the perspective of employees in these industries. Guided by Balzano and Modugno's (2025) four phase model, the study adopted a qualitative design. The perceptual data was analysed thematically, combining participant led insights with concepts guided by the four-phase model.

Findings indicate the limited and uneven presence of sustainable HR practices, the influence of multinational exposure, the secondary role of sustainability in employment decisions, its perceived impact on wellbeing and retention, weak employer branding communication, and changing expectations among younger employees. The study extends the four-phase model proposing a preparatory stage and recognising cultural influence as a key antecedent. The practical implications of the study include improved HR practices through clearer communication, stronger visibility of existing initiatives, and employee centred sustainability strategies.



Health system navigation among Russian speaking older migrants in Australia

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Supervisors: Distinguished Professor Colette Browning and Dr Amanda Young
Doctor of Philosophy (PhD)

As Australian health and aged care systems become increasingly digital, older migrants often face new challenges when navigating services. While much research focuses on digital access or skills, less attention has been paid to how older migrants experience everyday interaction with health and aged care systems in practice.

This study explores how older Russian speaking migrants in Australia navigate health and aged care systems, with particular attention to uncertainty, reliance on others, and confidence when dealing with institutional and digital processes. The study adopts a qualitative research design and draws on semi structured interviews conducted in Russian with older Russian speaking migrants, supported by a small number of community informant interviews.

Health system navigation is treated as a lived and situational practice shaped by prior institutional experience, perceived risk, and expectations of authority. Rather than assuming that hesitation or avoidance reflects a lack of capacity, the study examines how such responses can represent careful and reasoned ways of managing procedural ambiguity.

The study does not propose a technological solution, but develops empirically grounded design principles that can inform culturally and linguistically appropriate navigation support, including cautious and context sensitive uses of digital and AI supported guidance.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Leading across digital divides: Demographics and employee trust in virtual work environments

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Doctor of Philosophy

This study investigates antecedents to shaping employee trust within digitally mediated work environments. It is situated in the timely space of exploring employee confidence in leadership capacity to navigate emerging challenges such as technology and remote work.

While digital transformation has accelerated rapidly, there remains a dearth of literature examining how demographic differences influence trust formation and leadership effectiveness in virtual contexts. This study addresses this gap by exploring how leadership operates across demographic groups across digitally mediated work settings.

Utilising cross sectional survey data, the study aims to identify demographic variation in perceptions of leadership effectiveness and future readiness. Quantitative methodology enables comparison across demographic groups, enhancing the reliability and generalisability of results.

Key findings from the public sector, indicate increases in female leadership with declines in younger employees progressing to higher ranks. Employee satisfaction with leadership is lower compared to leaderships view of themselves. These outcomes promote further research into whether these trends are consistent in private sector and the impacts for digitally mediated settings.

The implications for research and practice include impact on organisational policy and leadership practice. We argue that demographic insights inform strategies to strengthen employee trust and support adaptive responses to ongoing digital transformation.

This research is supported by the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



A linguistic ethnography of language shift in the Nepali community of Australia

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This poster presentation explores how Nepali community living in Melbourne, Australia, is shifting to English as its dominant societal language. Guided by Spolsky's (2004, 2012) theory of the Family Language Policy Framework, the study keeps the family in the centre of language maintenance, viewing language planning, practice and management as negotiated within a family domain. The study also draws on Norton's theory of identity and investment, Bourdieu's theory of linguistic capital and symbolic power and Fishman's theory of language shift, to expand the theoretical dimensions of the research.

Employing linguistic ethnography as a research methodology, the study aims to uncover the process of language shift among the second-generation Nepali speakers living in Melbourne, with a particular focus on exploring why and how this linguistic shift is occurring including the challenges of family language maintenance. Data will be collected through semi-structured interviews, participant observations, informal communication with the community members and field notes.

The research seeks to contribute to the broader discussion of family language maintenance, bilingual education, linguistic identity, and the essence of multicultural and multilingual dimensions in Australian society with reference to Nepali migrant community living here.



From barriers to belonging: Social capital and refugee integration

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What shapes a successful new beginning for refugees in Australia?

This study brings together current research on refugee settlement and integration, highlighting both the challenges and pathways to success within the Australian context. The literature identifies four key barriers shaping refugee experiences: mental health impacts linked to trauma and post-migration stress; language barriers that limit access to services, education, and employment; economic hardship driven by structural inequalities; and social isolation and discrimination that undermine wellbeing and belonging. Despite these challenges, strong evidence points to resilience, adaptability, and the potential for positive outcomes when refugees are supported through culturally responsive, community-based approaches.

Central to this discussion is social capital — networks, trust, and relationships — which plays a critical role in enabling successful integration. Strong social connections enhance wellbeing, improve access to resources, and support meaningful participation in society. However, inconsistencies in defining and measuring social capital limit its application in research and practice.

While Australia's policy framework provides important support, gaps remain in coordination and long-term evaluation. Research needs to address a critical gap by examining how settlement programs and community initiatives contribute to sustained positive outcomes.

This research is supported by the Wyndham Community and Education Centre Inc Co-Op Scholarship and the Commonwealth through an Australian Government Research Training Program Fee-Offset Scholarship [DOI: <https://doi.org/10.82133/C42F-K220>].



Unleashing digital financial resilience: A global index for ranking nations and shaping policy

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This study develops and validates the Digital Financial Resilience Index (DFRI), a novel global composite measure integrating digital financial literacy (DFL), digital financial inclusion (DFI), and digital financial resilience (DFR) across 159 economies between 2014 and 2024. The research addresses an important measurement gap: while prior literature has examined literacy, inclusion, and resilience separately, no standardised global index has combined these dimensions within a single analytical framework. The study is grounded in a capability-resilience framework underpinned by critical realism, which conceptualises DFL, DFI, and DFR as theoretically distinct but sequentially related constructs. Using seven Global Findex indicators, the index is constructed through principal component analysis for the DFI and DFR dimensions and combined using equal weighting.

Results indicate strong psychometric performance for DFI and acceptable performance for DFR, with robustness checks showing stable rankings across alternative specifications. Regression and mediation analyses support a sequential pathway in which DFL predicts DFI and DFI predicts DFR, with DFI fully mediating the effect of literacy on resilience. Income-group analysis further reveals a U-shaped pattern in the inclusion-resilience relationship, with the strongest effects in low- and high-income economies. The DFRI contributes a scalable tool for comparative research, global benchmarking, and evidence-based policy targeting in support of SDG 8.10.



Loneliness in older adults: Interventions for home-based aged care

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The ageing population is growing globally, with increasing numbers of older adults preferring to stay at home. Over a million older adults aged 65 and above receive home-based aged care services in Australia. In addition to the high prevalence of loneliness, this cohort often experiences complex health problems, such as immobility and depression. The presence of loneliness and comorbid health issues complicates their health and social needs, increasing reliance on multiple aged care services and limiting engagement with community-based resources. The unique characteristics and challenges of home-based aged care recipients highlight the need to investigate loneliness interventions specifically tailored to this group, which remains understudied. To address this gap, a mixed-method systematic review is being conducted, with a registered protocol on PROSPERO (CRD420261361208).

Studies published since 2015 were searched across five databases and uploaded to Covidence, yielding 2,782 papers. The review is currently at the initial screening phase, with full-text screening expected to be completed prior to the conference presentation. This work will contribute to the field by providing a comprehensive synthesis of the available evidence on loneliness interventions in the context of home-based aged care, including the effectiveness and feasibility of such programs for both the recipients and providers.

This research is supported by a fee-offset and stipend through the Co-Op Scholarship funded by the Silverchain Group and Federation University Australia.



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