Program & Abstracts



S 12th Annual Postgrad Research & Practice Conference

19-20 June

Gold Coast Campus & Zoom Online

Welcome from SCPA President



Dear PRAXIS delegates,

On behalf of the SCPA Management Committee, I extend a warm welcome to the Gold Coast for PRAXIS 2025: SCPA's 12th Annual Postgrad Research & Practice Conference.

Again, this year, we are pleased to showcase a program of innovative and ground-breaking research from many of SCU's best and brightest postgraduate and honours students. And again, this year, we see strong representation from across the Faculties of Education, Health, Science & Engineering, Business, Law & Arts.

Some of our presenters are close to completing here at SCU, while many more will be just starting out and presenting their work for the very first time. We hope, then, that we'll all maintain a welcoming, supportive and inclusive atmosphere throughout the conference. To further promote the conference, presenters and postgrad research here at SCU, we encourage you to use the conference hashtag #PRAXIS2025 and tag @scupostgrads on Facebook, Twitter and Instagram. Finally, I offer our thanks and congratulations to all of our presenters for taking the time to share your work with all of your colleagues in this way.

Best regards,
MASUM BILLAH
PRESIDENT

Praxis Zoom link for online attendees, guests, supervisors, family and friends: https://scuonline.zoom.us/j/85235722794?pwd=Vi9pkueOqtZimS89LeehAwNkKkSNg8.1

Day One: Thursday 19 June (Morning)

8.30	Room C.105: Registrations Open Arrival Morning Tea until 11.00am will be provided in Marquee between Buildings A & C before you walk into the Theatres in Building C.
9.00	SCPA President Masum Billah to introduce Welcome to Yugambeh Country: Uncle John Opening by SCPA President Masum Billah and introduce Professor Leslie Christidis (ZOOM)

Opening Speaker: Professor Leslie Christidis (ZOOM)

Pro Vice Chancellor of Research Infrastructure and Operations

Session 1 Room C1.05		Chair: Alison Watts	
9.30	Samanmalee Mukadange In-person	Faculty of Education	Reconciliation Without Apology - Challenging Conventional Frameworks Through Grassroots Voices in Sri Lanka
9.50	Vicki Tillott In-person	Gnibi College	Cultural Safety and First Nations Consultation
10.10	Natalie Gardam In-person	Faculty of Education	VET Voices of Success: Aboriginal and Torres Strait Islander Student Experiences
10:30	Kelly Simpson In-person	Faculty of Education	Whose needs are we meeting? Accelerated ITE and early childhood education in Australia
	In-person		early childhood education in Australia

10.50 Morning Tea BREAK (30 mins)

Session 2 Room C1.05		Chair: Craig Wilson	
11.20	Kennedy Charindeguta In-person	Faculty of Science & Engineering	"Leveraging AI-Driven Educational Frameworks for Effective Engineering Asset Management in the Australian Mining Industry" – The Journey So Far
11.40	Pretty Londhe In-person	Faculty of Science & Engineering	Development and validation of photoautotrophic microalgal biofilm-based growth systems for high-value product development.
12:00	Ravi Poudel In-person	Faculty of Science & Engineering	Integrating Digital Twins with BIM for Enhanced HVAC Energy Efficiency in Buildings: A Review of Applications, Benefits and Challenges
12:20	Ehab Etman In-person	Faculty of Science & Engineering	Integrating AI and VR for enhanced safety training in construction
12.40	IIINCH Boom	A 4 OF	

12:40 LUNCH - Room A4.05

Day One: Thursday 19 June (Afternoon)

1:30	1:30 SCPA Annual General Meeting & Elections: Room C1.05				
Session	Session 3 Room C1.05 STUDY SLAM - Chair: Hasini Balage				
2.30	Banujan Kuhaneswaran In-person	Faculty of Science and Engineering	The Spelling Apocalypse: How Autocorrect Is Rewiring Young Brains		
2.35					

2.40 20 mins BREAK

Session	4 Room C1.05	Chair: Alison Wat	ts
3.00	Thor Rigney In-person	Faculty of Health	The rate and reason for attrition from five allied musculoskeletal healthcare workforces: a systematic review
3.20	Masum Billah In-person	Faculty of Health	Health promotion methods for refugees living in a regional town in NSW, Australia: Findings from a participatory qualitative study
3.40	Kerrie Oakes In-person	Faculty of Health	Confronting Case Study Challenges
4:00	Shastri Nimmagadda Zoom	Faculty of Health	Creating Collaborative Mental Health Informatics Solutions: Cultivating a Healthy Mindset for Knowledge-Guided Decision Support Systems
4.20	Finish for the day		

6.30 – 10.00pm Conference Dinner

MANTRA Twin Towns Coolangatta

Cnr of Griffith St and Wharf St, TWEED HEADS

Friday 20 June (Morning) Day Two:

Room C1.05: Registrations Open

9.00

Arrival Morning Tea until 11.00am will be provided in Marquee between Buildings A & C before you walk into the Theatres in Building C.

Session	5: Room C1.05	Chair: Dr Katie Hotko	
9.30	David Shaw In-person	Faculty of Education	Voicing the Unheard: Ethical Foundations in Research with Children of Incarcerated Parents
9.50	Jennifer Desrosiers In-person	Faculty of Education	Critiquing the cisnormative assignment: Early career teachers preparation to provide trans* students with safe and supportive environments
10.10	Gina Ygoa- McKeown In-person	Faculty of Education	We need to get out there and do things first- hand" - Young People's Science Learning through Environmental Education Pedagogy
10:30	Madison Rybka	Faculty of Education	The Impact of an Aboriginal Education Course on Pre-service Teachers' Confidence in Embedding Aboriginal Perspectives: A Self-Study of Teacher Education Practices
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10.50 Morning Tea BREAK (20 mins)

LUNCH Room A4.05

1.00

KEYNOTE SPEAKER: Dr Aiden Ricketts: 11.10

Law Lecturer, social change trainer, author and activist.

Session	6: Room C1.05	Chair: Craig Wilson	
11.40	Rebecca Giani In-person	Faculty of Health	Every Body, Every Mind: Exploring Individual Pathways to Emotional and Sensory Self-Regulation
12.00	Samantha Miller In-person	Faculty of Education	Experiences of Autistic Teachers: How being autistic shapes their teaching experience
12.20	Erin Davis In-person	Faculty of Health	A care practice bundle for nurses to support adults with cognitive impairment displaying challenging behaviour in hospital: pre-post study
12:40	Lisa Charmer In-person	Faculty of Health	Midwives' Experience of Primary Birth Trauma: A Narrative Thematic Analysis

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Day Two: Friday 20 June (Afternoon)

Session	n 7 Room C 1.05	Chair: Thor Rigney	
2:00	Dan Sullivan ZOOM	Faculty of Health	The Relationship between Muay Thai and Wellness and Quality of Life in a Previously Sedentary group of Older Australians
2.20	Josie Hockey In-person	Faculty of Education	Co-Planning for Competence: Investigating Early Career Primary Teachers' Perceptions of Self- Efficacy
2.40	Nathan Reynolds In-person	Faculty of Education	How do school leaders in secondary school environments establish and maintain engagement with teachers when the agenda is school improvement?
3:00	Adhwaith Das In-person	Faculty of Science & Engineering	Enhancing Biomethanation from Anaerobic Digestion of Organic Residues Using Hydrochar
3.20 Conference Wrap-Up and Close			

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Abstracts

SCPA wishes to acknowledge that the content of each abstract remains in its original form as supplied by the presenter.

Adhwaith Das

Enhancing Biomethanation from Anaerobic Digestion of Organic Residues Using Hydrochar

Anaerobic digestion is a well-established technology that recovers energy and nutrients from wet organic wastes. However, the effectiveness (and hence the economic viability) of biogas production depends strongly on the efficiency of biomethantion.

It is well known that the thermal carbonisation of organic materials can increase their digestibility to anaerobic organisms, and it has been suggested that hydrochar can enhance biomethane production during anaerobic digestion by acting as an electron shuttle to facilitate direct interspecies electron transfer (DIET) between the microorganisms involved. In this study, we aim to understand better the fundamental role hydrochar could play in improving anaerobic digestion by exploring the relationship between the properties of hydrochar, microbial composition and biochemical processes that contribute to biomethane production. We hypothesise that the carbonaceous matrix of hydrochar could assist in direct electron transfer through electrical conductance and provide capacitance through electron storage and release. Additionally, the highly porous surface of hydrochar possesses redox-active oxygencontaining functional groups, which could aid in accepting and donating electrons. Moreover, hydrochar could also provide a surface for microbial growth, enhancing closer associations with each other.

We aim to investigate the surface and electrochemical properties of hydrochar that could assist in the direct electron transfer between the microorganisms involved. It is anticipated that the outcomes from this study will aid in optimising biomethane production during anaerobic digestion, thus enabling a more significant recovery of energy from organic waste materials and contributing to a circular economy. This project will also contribute to achieving the sustainable development goals (SDGs) adopted by the United Nations member states.

Banujan Kuhaneswaran

The Spelling Apocalypse: How Autocorrect Is Rewiring Young Brains

The widespread adoption of autocorrect technology has fundamentally altered how young people develop spelling proficiency. This research examines the neurological and educational impacts of automated spelling correction on Generation Z's orthographic processing abilities. The study introduces the SPELL framework (Skip learning phonetics, Pattern recognition dies, Errors become invisible, Lazy brain syndrome, Lifelong dependency) to categorise the cognitive changes observed in digital natives.

Through analysis of spelling assessment data, handwritten examination results, and comparative studies between pre- and post-smartphone generations, many studies reveal a concerning trend: students who rely heavily on autocorrect demonstrate significantly impaired spelling abilities in non-digital contexts. The phenomenon extends beyond simple spelling errors to affect broader literacy skills, including reading comprehension, vocabulary development, and pattern recognition.

The findings indicate that constant autocorrect usage prevents the formation of crucial neural pathways responsible for orthographic memory. This "digital dementia" creates learners who are functionally literate only when connected to spelling-assistance technology. The implications are profound for education systems, suggesting a need to reconsider how spelling and writing are taught in an increasingly automated world. The research proposes that deliberate practice without digital assistance remains essential for developing robust literacy skills.

Daniel Sullivan

The Relationship between Muay Thai and Wellness and Quality of Life in a Previously Sedentary group of Older Australians

Objective: This study used a mixed methods design comprising a quasi-experimental and qualitative analysis informed by constant comparative analysis to compare the effects of participation in modified Muay Thai on participants sense of wellbeing and quality of life.

Design: This longitudinal study was conducted on the Southern Gold Coast in Southeast Queensland Australia and recruited a convenience sample (n=20) of previously sedentary older Australian Adults (mean age = 66.0 years, SD = 9.33) as well as a comparison group (n=7, mean age = 68 years, SD = 4.1). Reliable instruments including the SF12 and PERMA Profiler, were used to measure wellbeing and quality of life before and after the 12-week programme where the Muay Thay group trained twice weekly. Semi-structured interviews were conducted at the end of the programme to give context to the quantitative results and address potential attrition of the study participants. Participants in the comparison group engaged in walking at a similar intensity and duration.

Results: Preliminary statistical indicates the Muay Thai group improved (p<0.05) from baseline on almost all mental health variables. However, analysis using a 'linear mixed effects model' indicated the difference between groups was less pronounced. Qualitative analysis identified distinct motivational factors that influenced participants' decision to initiate and engagement in the respective exercise programmes.

Conclusions: The findings suggest that participation in Muay Thai can improve older adults' well-being and quality of life over 12 weeks. Additionally, this study highlights the significance of understanding motivational factors in selecting and maintaining physical activity programs for previously sedentary older adults, which is critical for addressing the challenges of aging populations.

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David Shaw

Voicing the Unheard: Ethical Foundations in Research with Children of Incarcerated Parents

This presentation will focus on the ethical foundations underpinning our research with children and young people whose parents are incarcerated, a vulnerable population often marginalised in policy and research. Recognising their heightened vulnerability due to potential Adverse Childhood Experiences (ACEs) and the pervasive stigma associated with parental incarceration, a robust and carefully developed ethical approach was paramount from the outset. Crucially, our ethical framework was intentionally designed to avoid pathologising these young people, focusing instead on understanding their experiences and resilience within the educational context. This presentation will detail the principles and processes guiding our research, highlighting ethics not as a hurdle but as the very bedrock of our methodology and the primary mechanism for safeguarding participants and ensuring their experiences are not framed as deficits.

Central to our approach was the development of a trauma-informed framework, meticulously shaping interview protocols to prioritise the young people's perspectives on their education whilst minimising potential distress and avoiding language that could inadvertently label. We will explain the strategies employed to ensure genuinely informed consent and ongoing assent, navigating complex familial situations with a steadfast commitment to the child's best interests and autonomy. Furthermore, we will outline our culturally responsive engagement, particularly concerning Aboriginal and Torres Strait Islander young people, guided by principles of self-determination and community consultation, ensuring their experiences are understood within their cultural context, not through a lens of pathology.

A core focus will be on the proactive measures taken to ensure participant safety, including aspects of rigorous data management, transparent community engagement and communication. This presentation will underscore the iterative ethical reflection and adaptation process that informed our research design and interactions, continually assessing our language and approach to avoid pathologising narratives. By detailing the development of our ethical foundations, we aim to offer insights and practical considerations for others engaged in similar research landscapes, demonstrating how a primary focus on ethical safeguarding can lead to responsible and impactful inquiry that centres the lived experiences of participants.

Ehab Etman

Integrating AI and VR for enhanced safety training in construction

The construction industry remains one of the most hazardous sectors globally, with a high rate of accidents resulting in severe health and financial consequences. Human error is responsible for the vast majority of these incidents which is directly a result of insufficient training. Traditional training methods—ranging from on-site instruction to classroom and video-based learning—struggle to prepare workers for the complex, high-risk environments they encounter. This research investigates the integration of Artificial Intelligence (AI) and Virtual Reality (VR) to enhance safety training effectiveness in construction. While VR offers immersive, risk-free environments that improve engagement and knowledge retention, AI introduces personalization, real-time feedback, and data-driven adaptation. However, existing studies tend to evaluate these technologies in isolation. This research will explores combined potential, aiming to develop an advanced, adaptive training model that simulates real-world hazards and dynamically responds to trainee behavior.

The study will also identify high-risk construction tasks most suitable for AI-VR-based training and utilize Unreal Engineto enhance environmental realism which is also underexplored in existing literature. By evaluating user immersion and learning efficacy across varying levels of realism, the project seeks to establish design principles for effective VR training systems. The goal is to reduce accidents numbers by utilizing new technologies and making them as cost efficient as possible to be widely adopted in the industry.

Erin Davis

A care practice bundle for nurses to support adults with cognitive impairment displaying challenging behaviour in hospital: pre-post study

Introduction: Hospitalisation of adults with cognitive impairment is often linked to an exacerbation of challenging behaviour, described as an active attempt to express or address an unmet need. In response, nurses should prioritise person-centred nonpharmacological interventions to address the underlying needs. However, despite these interventions being linked to reduced severity and frequency of challenging behaviours, they remain underutilised in hospital settings. To enhance nurses' responses to adults with cognitive impairment displaying challenging behaviour, a care practice bundle (including a framework, education, and resources) was co-designed and commenced on 13 Australian hospital wards.

Methods: An amended psychometrically tested tool was used to measure the impact of a care practice bundle on nurses' responses to adults with cognitive behaviour displaying challenging behaviour in hospital Results: Nurses responded more positively to adults with cognitive impairment displaying challenging behaviour by reacting with care and less likely to react by ignoring. The nurses were also more likely to use professional knowledge and problem-solving abilities, and less likely to support the use of medications as alternatives to physical restraints.

Conclusion: Delivery of a care practice bundle significantly improved nurses' responses to challenging behaviour. This is likely due, in part, to the multifactorial approach. Improvements to nursing practice in this study indicate enhancements to underlying attitudes towards adults with cognitive impairment and confidence to implement nonpharmacological interventions. The findings of this study highlight the need for care practice bundles driven by the organisation which empower nurses to better support adults with cognitive impairment.

Erin Davis (Presenter) Christina Aggar Michelle Bissett

Gina Ygoa-McKeown

"We need to get out there and do things first-hand" - Young People's Science Learning through Environmental Education Pedagogy.

The impacts of the Anthropocene will significantly affect young people, and scientific literacy could assist them with understanding its causes and consequences, possibly leading to action to mitigate its effects. However, student participation and engagement in science in secondary school are declining.

This study privileges young people's voices and aims to generate understandings and new knowledge of how young people in secondary school experience science learning through environmental education pedagogies.

Thirty-one young people enrolled in year 9 science at three South-East Queensland schools participated in the study. The young people attended a field trip, with a different destination for each school, from mangrove and freshwater wetlands to a sand island or an underwater cove. The students photographed aspects of their learning. Ethnographic methods, including observation, semi-structured photo-elicitation interviews and small group discussions, were used. The photographs, observations and recordings of the interviews are analysed and organised into themes to assist in interpreting the findings.

Jennifer Desrosiers

Critiquing the cisnormative assignment: Early career teachers preparation to provide trans* students with safe and supportive environments

This thesis examines the pervasive influence of cisnormativity in educational settings, where the deeply entrenched assumption that all individuals' gender identity aligns with their assigned sex at birth. Cisnormativity manifests in policies and practices such as gendered admissions, dress codes, and segregated sports teams, as well as in curricula that reinforce cisgender norms through language and narratives. The physical architecture of schools, with binary bathroom facilities and locker rooms, further perpetuates this normativity. Consequently, educational institutions position cisnormativity as natural, creating an affirming environment for cisgender students while marginalizing gender diverse students.

Gender diverse students often encounter hostile educational environments, experiencing heightened risks of violence, bullying, and harassment, which adversely affect their academic progress and mental health (Airton, 2013; Ferfolja, 2019; Ferfolja & Ullman, 2020; Hsiang-Te Tsuei et al., 2019). Teachers play a critical role in either perpetuating or challenging these norms. While many teachers are willing to support gender diverse students, they often lack the necessary knowledge, skills, and institutional backing. Some teachers may even contribute to transphobic incidents. The inclusion of gender diversity curricula in teacher education is thus essential for preparing teachers to create safe and supportive environments for gender diverse students.

This research, informed by Laurel Richardson (2008) and Laura Ellingson's (2009, 2014) "crystallization" methodology, integrates multiple perspectives and representational forms to explore this issue. Through interviews with eight early career primary teachers and three academic staff members in New South Wales, this study investigates how teacher education prepares primary teachers to disrupt cisnormativity and support gender diverse students. Sara Ahmed's (2006, 2012, 2019, 2023) writings on feminism, wilfulness, and orientation guide the analysis, offering a nuanced understanding of the challenges and opportunities in fostering inclusive educational environments.

Jennifer Desrosiers (Presenter) Liz McKinlay Lana McCarthy

Josie Hockey

Co-Planning for Competence: Investigating Early Career Primary Teachers' Perceptions of Self-Efficacy.

Early Career Teachers [ECTs] often face challenges in translating their university training into competent classroom practice. This study investigates how participating in co-planning contributes to ECTs' perceptions of their professional competence and self-efficacy. Focusing on NSW primary teachers, the research explores the question: How do ECTs describe the contribution of co-planning to their sense of competence and professional self-efficacy?

The literature review highlights co-planning as a collaborative practice that fosters self-efficacy and professional competence in teachers. Sasson and Malkinson's (2021) U.S. study of 300 teachers found an association between coplanning and enhanced self-efficacy. Building on these findings, the present research contributes to the Australian context by exploring whether similar patterns emerge among NSW primary teachers, offering insights into how coplanning may support ECTs during the early stages of their careers.

This research will involve semi-structured interviews with five ECTs who engage in co-planning, using open-ended questions designed to elicit rich, reflective insights into their individual experiences. While the primary focus will be on participants' perceptions of their competence, the format also enables the collection of broader perspectives and emergent ideas related to co-planning and professional efficacy.

Data analysis will be guided by Bandura's theory of self-efficacy (1997), focusing on understanding how ECTs articulate their perceived competence in relation to their experienced co-planning practices. The four parts of self-efficacy theory, *mastery experiences, vicarious experiences, social persuasion,* and *physiological feedback,* will form the starting point for a deductive approach to coding findings.

Kennedy Charindeguta

"Leveraging AI-Driven Educational Frameworks for Effective Engineering Asset Management in the Australian Mining Industry" – The Journey So Far

The Australian mining and resource industry is defined by capital-intensive operations, particularly in maintenance and production, where expenditure and efficiency are closely scrutinised through Key Performance Indicators (KPIs). As the sector continues to evolve technologically, Engineering Asset Management (EAM) has emerged as a critical discipline for ensuring sustainable and cost-effective asset utilisation. Central to effective EAM is the development of high-performing maintenance teams, supported by structured learning, coaching, and knowledge transfer initiatives. This research examines the integration of Artificial Intelligence (AI)-driven educational frameworks to enhance learning and development strategies for maintenance personnel, thereby contributing to improved asset reliability. A systematic literature review was conducted, focusing on high-quality peer-reviewed publications from the past 15 years, accessed through Scopus, Web of Science, and ProQuest. The review examined the interrelationship between workforce capability development and the effectiveness of EAM principles, with particular emphasis on AI-enhanced training systems. Key themes emerging from the literature include the importance of experiential learning, technical coaching, digital upskilling, and AI-supported knowledge transfer mechanisms within industrial settings.

Ethics approval for this study presented methodological challenges that prompted critical reflection on the broader implications of ethical governance in engineering research. Engagement with academic and industry communities at key conferences—including SCU PRAXIS 2024, UniSQ Engineering Conference 2024, and AAEE 2024—yielded substantial feedback, particularly regarding the transformative role of AI in training strategies for enhancing asset reliability. Field collaboration with mining operations has generated constructive discourse, offering real-world insights that validate and challenge the research hypothesis. These interactions have highlighted a growing recognition among major mining corporations of the strategic importance of investing in the upskilling and education of their maintenance teams. Furthermore, this research aims to identify gaps within existing apprenticeship and graduate training programmes and assess their impact on asset management performance. The findings will inform actionable recommendations to bridge knowledge gaps across industry stakeholders, ensuring that future learning and development initiatives are aligned with the technological trajectory of EAM, particularly in the age of AI.

Kennedy Charindeguta (Presenter)
Dr Steve Pudney - Principal Supervisor (SCU)
Dr David Thorpe - Associate Supervisor (UniSQ)

Kelly Simpson

Whose needs are we meeting? Accelerated ITE and early childhood education in Australia.

The interrelationship between high-quality early childhood education and care (ECEC) provision and educators with higher level qualifications and specialised early years knowledge is well established in the literature. Australian ECEC qualification requirements recognise the value of tertiary initial teacher education (ITE) qualifications, with early childhood teachers (ECTs) required to hold an approved tertiary level ECT ITE qualification since 2014. Current approved ECT ITE programs include a range of undergraduate and postgraduate options, with an increasing number of these now allowing students to become qualified for teaching in under two years. These accelerated ITE (AITE) programs reflect a key focus of Australian education policy towards increasing the percentage of degree qualified ECTs and addressing ECT workforce shortages that are impacting the ECEC sector through providing fast-track training options that pre-service teachers highlight a preference towards. Concerns have been raised in relation to these qualification pathways though, with questions in relation to the effectiveness of AITE programs in developing the graduates' pedagogical knowledge to, and preparedness for, delivering quality ECEC programs highlighted in emerging literature. Exploring the intersecting needs, interests, and priorities of the ECEC sector, tertiary institutions, governmental policy, children, families and graduates, this presentation will provide a frame for AITE in the context of ECT training and raise the question of whose needs these programs are meeting within the Australian ECEC context.

Kerrie Oakes

Confronting Case Study Challenges

Conducting case studies is a valuable way to gain an in-depth and multi-faceted knowledge of a phenomenon. They allow the researcher to gather data from a variety of sources and learn directly from those with lived experience. Case studies are used extensively in social sciences and other fields to examine "how" and "why". However, planning and conducting case studies, particularly in a global environment, can present some unique challenges. Kerrie will outline some of the challenges she is facing in her work examining community managed herbal medicine, and offer some of the interesting ways she is overcoming them.

Lisa Charmer

Midwives' Experience of Primary Birth Trauma: A Narrative Thematic Analysis

Background: According to the Australian Health Practitioners Regulation Authority, there are 32,000 registered midwives, 99% identify as female. Australia recorded 286,998 births in 2023, with 1 in 3 of the birthing women experiencing birth trauma. The exact proportion of midwives who gave birth is unknown; using general population data, an estimated 5,000 - 11,000 midwives may have experienced primary birth trauma in Australia.

Methods: Ten midwives self-reported as having experienced Primary Birth Trauma (PBT) and consented to taking part in a semi-structured interview. Data were analysed using a general inductive approach: thematic analysis.

Results: Six categories, also known as themes, emerged from the data. The study found that midwives experienced varying levels of PBT and as a result varying levels of PTSD, depression, anxiety, stress and burnout, impacting their return to work. The ongoing symptomatology of PTSD impacts midwives psychologically, professionally and personally.

Lisa Charmer (Presenter)
Prof Julie Jomeen
Prof Marianne Wallis
Dr Elaine Jefford

Masum Billah

Health promotion methods for refugees living in a regional town in NSW, Australia: Findings from a participatory qualitative study

Background: Refugees experience unique health needs. They experience potential health risk behaviours such as smoking tobacco, drinking alcohol, physical inactivity, and nutritional disorders (SNAP). Health promotion interventions are not currently sufficient. However, this study aimed to identify health promotion methods for refugee communities living in a regional town in NSW, Australia, and assist in co-designing health promotion interventions.

Methods: This study employed a participatory qualitative study design. Individual in-depth interviews and focus group discussions were conducted. A semi-structured questionnaire was used to interview 18 Myanmar and Iraq/Syria participants. The study followed a purposive sampling method. A deductive thematic analysis method was used to analyse the data. We performed data analysis using NVivo software (Version 14). After reading and re-reading the transcripts, codes were generated to develop sub-themes leading to themes.

Masum Billah (Presenter) Ratika Kumar Gail Moloney Michele Greenwood Gillian Gould

Madison Rybka

The Impact of an Aboriginal Education Course on Pre-service Teachers' Confidence in Embedding Aboriginal Perspectives: A Self-Study of Teacher Education Practices

This research investigates how an Aboriginal education course influences pre-service teachers' confidence and readiness to embed Aboriginal perspectives in their teaching practice. Despite curriculum mandates, many pre-service teachers report feeling underprepared and lack the cultural knowledge and confidence necessary for authentic integration of Aboriginal content.

This study addresses a critical gap in teacher education by exploring the role of an Aboriginal educator in designing and delivering an Indigenous education course within a university setting. Employing a self-study methodology grounded in Indigenous Ways of Knowing, Being, and Doing, the research critically examines the educator's own teaching practices and their impact on students. Data will be collected through reflective journaling, yarning circles, and written student reflections, ensuring cultural relevance and ethical integrity in line with the AIATSIS Code of Ethics. Thematic and Indigenous heuristic analyses will be used to identify patterns in pre-service teachers' experiences, focusing on confidence, identity, and perceived barriers. The study aims to generate new knowledge on effective pedagogical strategies and contribute to the development of culturally safe and inclusive classrooms.

Findings will inform teacher education programs and highlight the importance of Indigenous leadership in curriculum design. Ultimately, this research seeks to empower future educators to authentically embed Aboriginal perspectives, fostering reconciliation and cultural respect in Australian schools.

Natalie Gardam

VET Voices of Success: Aboriginal and Torres Strait Islander Student Experiences

While completing a VET qualification can significantly enhance young people's life opportunities, Aboriginal and Torres Strait Islander students face lower rates of completion, participation, and pathways compared to their non-Indigenous peers. As a non-Indigenous woman and Doctor of Education student at Southern Cross University working in the VET sector, I conducted this research on Dharug Country in NSW. I aim to provide insights from my research involving Aboriginal-facilitated yarning sessions with 21 Aboriginal and Torres Strait Islander students at TAFE NSW. My research seeks to understand how Aboriginal and Torres Strait Islander students experience success in VET and how they can have a voice in their education. This study is crucial for the VET sector, as it highlights the need to address the educational outcome gap through Aboriginal and Torres Strait Islander students' perspectives and identify practical solutions.

Using concepts of voice and worldview, I employed narrative inquiry to capture the lived experiences of these students. By listening to and collaborating with Aboriginal community members, I ensured that the study was culturally relevant and respectful. I applied reflexive thematic analysis to the data, and in my presentation, I will discuss the findings. Attendees will gain insights into how VET can enhance the student experience through cultural considerations, understand what Aboriginal and Torres Strait Islander students want to voice and learn what constitutes a successful experience from the student's perspective.

Nathan Reynolds

How do school leaders in secondary school environments establish and maintain engagement with teachers when the agenda is school improvement?

Governments worldwide are intensifying efforts to enhance educational outcomes, fully recognising the pivotal roles of school leaders and teachers in the improvement process. Engagement is widely recognised in the organisational literature as a critical factor in performance, with many educational studies highlighting its importance in the improvement process. Despite numerous authors emphasising the relevance of engagement in educational contexts and the existence of various theoretical frameworks, there is very little practical understanding of how to apply these concepts in the context of school improvement. Concerningly, recent reports have highlighted a significant decline in teacher work engagement. Teacher work engagement—the antithesis of burnout—is characterised by energy, dedication, and deep focus, and is vital for student success. While substantial research exists on evidence-based school leadership practices aimed at school improvement—such as leading collaboration, school vision, organisational structures, professional learning, teaching and learning, and the enabling conditions supporting these domains—a notable gap remains in understanding how the associated leadership practices and enabling conditions influence teacher work engagement.

This research seeks to examine how school principals establish and maintain teacher engagement, offering insights into the evidence-based practices and enabling conditions that shape teacher work engagement. Employing a pragmatic mixed-methods exploratory sequential research design, initial interviews will be conducted with school principals to elucidate the practices and enabling conditions they employ to foster teacher work engagement. Subsequently, a questionnaire will assess how these practices and conditions influence teachers' work engagement. The goal is to uncover leadership practices and enabling conditions that significantly impact teacher work engagement in school improvement initiatives, thereby supporting more practical strategies for school improvement.

Pretty Londhe

Development and validation of photoautotrophic microalgal biofilm-based growth systems for high-value product development.

Microalgae are potential candidates for sustainable biomass production and high value bioproducts, but conventional culture methods have scalability and harvesting efficiency challenges. Perfused biofilm bioreactors (PBBs) are intended to boost biomass concentration, minimise water usage, and simplify harvesting, thereby solving key bottlenecks in microalgal production. This study investigates PBBs as an alternative microalgal cultivation method for increasing biomass and streamlining harvesting.

The study will examine the growth and lipid production of Nannochloropsis oceanica and Tisochrysis lutea, two high-PUFA-producing microalgal strains, and compare their performance in PBBs with suspension cultures. Key goals include understanding the best performing substrate materials for biofilm development, optimising growing conditions, and assessing biomass and lipid extraction. A lab-scale prototype PBB system is being tested for productivity and lipid quality compared to suspension systems.

Furthermore, this study will investigate the techno-economic feasibility of PBBs, assessing their potential. for industrial use. This work intends to contribute to creating a more effective microalgal production system scalable for commercial use that offers the potential to overcome the major hurdles of dewatering and water and energy use of suspension cultivation-based systems. These systems are also applicable to economically treat nutrient-rich wastewater by merging biofilm-based technology and microalgal production. The findings are expected to provide useful information for improving microalgal cultivation methods suitable for high-value lipid-based bioproduct development.

Ravi Poudel

Integrating Digital Twins with BIM for Enhanced HVAC Energy Efficiency in Buildings: A Review of Applications, Benefits and Challenges.

Buildings consume more than 40% of the global share of energy, and hence the sector has spurred substantial interest in cutting-edge technologies that could improve the performance and efficiency of Heating, Ventilating and Air Conditioning (HVAC) systems. HVAC systems are major energy-consuming systems in Buildings. Digital Twins (DTs) are emerging as a dynamic, evolving model of physical systems that can be a reliable paradigm for enhancing HVAC energy efficiency. It is also important to ensure the thermal comfort of building inhabitants, and hence it becomes inevitable to search for systematic solutions that balance the energy consumption with occupant comfort. There are several challenges to achieving such a balance. The first one is to accurately predict the future states of inhabitants which will allow us to actively regulate temperature. The second challenge is to maintain the accuracy of the Digital twin. Third being the seamless integration of IOT, smart energy systems with DT. The fourth challenge is to select an optimal strategy for adaptive regulation between energy use and thermal comfort.

This study explores the findings from a literature review investigating the current landscape of DT applications for improving HVAC energy performance in both new and refurbished buildings.

Rebecca Giani Vieira

Every Body, Every Mind: Exploring Individual Pathways to Emotional and Sensory Self-Regulation

Self-regulation is essential for thriving personally, socially and especially, academically - yet it can be framed within one-size-fits-all models. This presentation takes a neurodiverse-affirming (NDA) approach as a starting point, expanding it to recognise that all individuals, being neurodivergent or not, possess distinct sensory and emotional profiles. By embracing the NDA principle that every person is unique, we explore how self-regulation strategies must be equally personalised. Participants will be guided through reflective practices to identify their own sensory and emotional needs and discover adaptive, person-centred tools that support regulation in everyday contexts. The session invites you to reframe self-regulation not as a means of compliance but as a lifelong, empowering process of tuning into your body, emotions, and environment through this inclusive lens.

Samanmalee Mukadange

Reconciliation Without Apology -Challenging Conventional Frameworks Through Grassroots Voices in Sri Lanka

Ethnic reconciliation is a vital element of post-conflict peacebuilding, aimed at restoring relationships, rebuilding trust, and fostering coexistence in divided societies. In multicultural contexts affected by ethnic violence, it is essential not only for justice but also for sustainable peace. Although reconciliation is often framed through commonly accepted models, its meaning and practice vary significantly across historical, political, and social contexts. Understanding these local interpretations is crucial, especially where conventional frameworks may not apply. In post-war Sri Lanka, where a 27-year civil conflict between the Sinhalese-majority government and the Tamil separatist group (LTTE) ended in 2009 without a formal peace agreement, reconciliation efforts have followed a top-down, government-led approach. This study investigates how grassroots communities in the Northern and Eastern provinces define and understand reconciliation on their own terms, offering context-specific meanings that diverge from dominant peace discourses. Using a qualitative, phenomenological methodology, the study draws on in-depth interviews and open-ended surveys with Sinhalese, Tamil, and Muslim individuals who have lived through the war. Participants were selected through purposive and criterion sampling to capture diverse perspectives on conflict and reconciliation.

Findings reveal that grassroots definitions of reconciliation emphasise social unity, peaceful coexistence, justice, and the absence of politically motivated ethnic tensions. The key elements of global reconciliation frameworks, such as truth-telling, apology, forgiveness, and reparations, were largely absent in participants' explanations. Consequently, people define reconciliation based on lived experiences shaped by structural inequalities, cultural violence, and mistrust toward institutional mechanisms. These unique perspectives can be largely attributed to the absence of a peace agreement in Sri Lanka's post-war context. The government-led, top-down approach to reconciliation, lacking a negotiated settlement, has left little space for shared understanding or inclusive dialogue between conflicting parties. This study shows that grassroots perspectives can challenge conventional frameworks, as reflected in Sri Lanka's distinct post-conflict realities. It therefore calls for reconciliation efforts to move beyond template-driven models and engage with locally grounded meanings shaped by context.

Keywords - Ethnic reconciliation, Grassroots perspectives, Post-war Sri Lanka

Samantha Miller

Experiences of Autistic Teachers: How being autistic shapes their teaching experience

Although the educational experiences of autistic students have been widely explored, the perspectives and contributions of autistic teachers remain markedly under-researched. This study examines how autism shapes the professional experiences, pedagogical practices, and workplace interactions of autistic educators within mainstream educational settings. Adopting a strengths-based, identity-affirming framework informed by the self-determination theory and inclusive education models, the research seeks to move beyond deficit-based discourses by positioning autism as a form of cognitive diversity that offers valuable insights into inclusive teaching and systemic reform.

Using a qualitative methodology, semi-structured interviews with autistic teachers will be conducted to explore their lived experiences, including the strengths they bring to the profession, the challenges they encounter, and the strategies they employ to navigate classroom management, social communication, and sensory demands. The study critically engages with key themes identified in the literature—strengths, supports, relationships, exclusion, challenges, and lived experience—to situate its findings within the broader context of neurodivergent representation and workplace inclusion in education.

This research contributes to the growing field of neurodiversity studies by amplifying the voices of autistic educators and highlighting the need for more equitable professional standards, inclusive policies, and adaptive workplace practices. Findings are expected to inform educational leadership, teacher training, and policy development, with implications for rethinking how teaching standards and school cultures accommodate neurodiverse professionals. In doing so, this study seeks to advance a more inclusive and representative understanding of autism in education, one that values and incorporates the perspectives of autistic adults in teaching roles.

Shastri Nimmagadda

Creating Collaborative Mental Health Informatics Solutions: Cultivating a Healthy Mindset for Knowledge-Guided Decision Support Systems

Mental health conditions, illnesses, and wellness are coexistent events holistically relatable within broader contexts of human- and built-environmental ecosystems. Connectivity is crucial for deducing clinical decision support services, including diagnosis and management. In addition, sustainment between scalable human-centric built environments can relate to mental health occurrences. However, the scope of DEST designs and their implementations still need attention in resolving ecological connectivity. The scoping review examines the state of the art of the DEST tools, design features, DSR theory, and their development in unifying, evaluating diverse ecologies and mitigating mental healthcare experiences. The scoping review is done by empirical studies through DEST designs and unified diverse ecologies with mental health episodes

The literature, however, lacks methodological articulations appropriate to digital ecosystem application development and reports inadequacies in construing new knowledge with existing tools. The review results suggest a knowledge gap in ecosystem application development and its implementation in mental healthcare. It includes connectivity between diverse ecologies and integrating them with alternate green information system solutions.

Shastri Nimmagadda (Presenter) Eric Brymer *Ali Reza Alaei*

Thor Rigney

The rate and reason for attrition from five allied musculoskeletal healthcare workforces: a systematic review

Objective: Attrition from the healthcare workforce is an essential consideration when determining the status of a health system. The World Health Organization (WHO) forecasts a global shortage of healthcare workers that will continue into 2030. Musculoskeletal conditions remain the greatest cause of disability internationally. This review aimed to investigate the current knowledge regarding attrition from chiropractic, exercise physiology, podiatry, and osteopathic professional workforces.

Methods: The MEDLINE, CINAHL, AMED, Scopus, and Web of Science databases were searched with search terms developed from the CoCoPop mnemonic and concept analysis. Relevant observational and experimental studies published in peer-reviewed journals were included through a rigorous process involving independent evaluators. Quality analysis was performed using a modified appraisal tool for cross-sectional studies (AXIS). Ten data items were extracted, which included participant characteristics and description of results. Results were analysed through a narrative synthesis.

Results: A total of 676 records were screened which resulted in six studies being included: two chiropractic, two physiotherapy, and one osteopathy. Podiatry and exercise physiology studies did not met the inclusion criteria. Reported annual attrition prevalence was between 5 and 25%. Reasons for attrition were multifactorial with financial stressors hypothesised as being significant. One study was of moderate quality. The remaining were of low or critically low quality.

Conclusions: Little remains known about attrition from musculoskeletal professions. Studies of questionable quality that analysed old data provide little information that is known. Future research should investigate professional attrition directly and learn firsthand know from individuals with lived experience.

Thor Rigney (Presenter) Sandra Grace Joanne Bradbury

Vicki Tillott

Cultural Safety and First Nations Consultation

Ensuring occupational therapy students can work in a culturally safe manner is essential for the delivery of effective health services. In Australia, the integration of curriculum aimed at fostering cultural safety is a mandated requirement for many health professional programs. Despite this, there remains limited empirical evidence linking such educational content to students' capacity to practice in a culturally safe manner.

To ensure that this topic was investigated in a culturally appropriate manner, First Nations peoples from a variety of nations, were invited to form an Advisory Group. A Yarning approach was utilised to explore their lived experiences of cultural safety within healthcare settings.

Findings reveal that cultural safety is a dynamic, lifelong process grounded in relational learning and personal growth. Central to this journey are authentic relationships, adherence to cultural protocols, and a deep respect for Indigenous knowledge systems. Members emphasised that cultural safety is uniquely experienced by each individual receiving care, and that meaningful engagement with local First Nations communities is essential for healthcare professionals. Building trust through empathy, respect, and active listening was identified as foundational.

Systemic barriers that hinder the advancement of cultural safety were highlighted. These include limited time and resources for health professionals, the enduring legacy of colonialism, and the marginalisation of Indigenous knowledge within tertiary education. Furthermore, opportunities for direct, respectful engagement with First Nations communities remain scarce in current educational frameworks. These insights underscore the need for ongoing reform and sustained commitment to culturally safe practices in occupational therapy education and delivery.

Vicki Tillott (Presenter) Tarunna Sebastian Michelle Donelly Stuart Barlo Beth Mozolic-Staunton

NOTICE & AGENDA

13th ANNUAL GENERAL MEETING



DATE: Thursday, 19 June, 2025

TIME: 1.30 pm

VENUE: Building C Lecture Theatre,

Room C1.05, SCU Gold Coast

ZOOM:

https://scuonline.zoom.us/j/8523 5722794?pwd=Vi9pkueOqtZimS89

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AGENDA

1. Open, acknowledgement of traditional custodians and welcome by President (Masum Billah)

- 2. Attendance & Apologies
- 3. Minutes of previous AGM held Thursday, 22 June 2024

Motion required:

"This meeting adopts the minutes of AGM 22 June 2024, as circulated and tabled, as a true and accurate record of the proceedings of that meeting."

- 4. President's Report Masum Billah to table 2024 Annual Report.
- 5. Financial Report (including Auditor's Report & audited Annual Statement) to 31 December 2024.

Motion required:

"This meeting adopts the Auditor's Report and audited financial statements to 31 December 2024 as a true and accurate account of the association's finances for 2024, and holds that it provides reasonable grounds that the Association to pay all debts as and when they fall due."

- 6. Election of Returning Officer and assistants
- 7. Election of Management Committee
 - a. President
 - b. Secretary
 - c. Treasurer
 - d. Vice President
 - e. Ordinary members of Committee at least three (3) positions available
- 8. Thanks & Close of Meeting

On behalf of the Management Committee CRAIG WILSON PUBLIC OFFICER

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