

# The Future is Now



HIGHER EDUCATION RESEARCH  
GROUP ADELAIDE



**26 September 2023**  
**Flinders University**

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# Acknowledgments



HIGHER EDUCATION RESEARCH  
GROUP ADELAIDE

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## HERGA EXECUTIVE

**Edward Palmer** The University of Adelaide  
**Sarah List** The University of South Australia  
**Jeanne Young Kirby, Paul Cooper, Liu Fei Tan,**  
**Voula Gaganis** Flinders University

## CONFERENCE CHAIR

**Jeanne Young Kirby** Flinders University

## ACKNOWLEDGEMENTS

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**Sophie Katchor** Event Management

And thank you to all the volunteers who assisted on the day.

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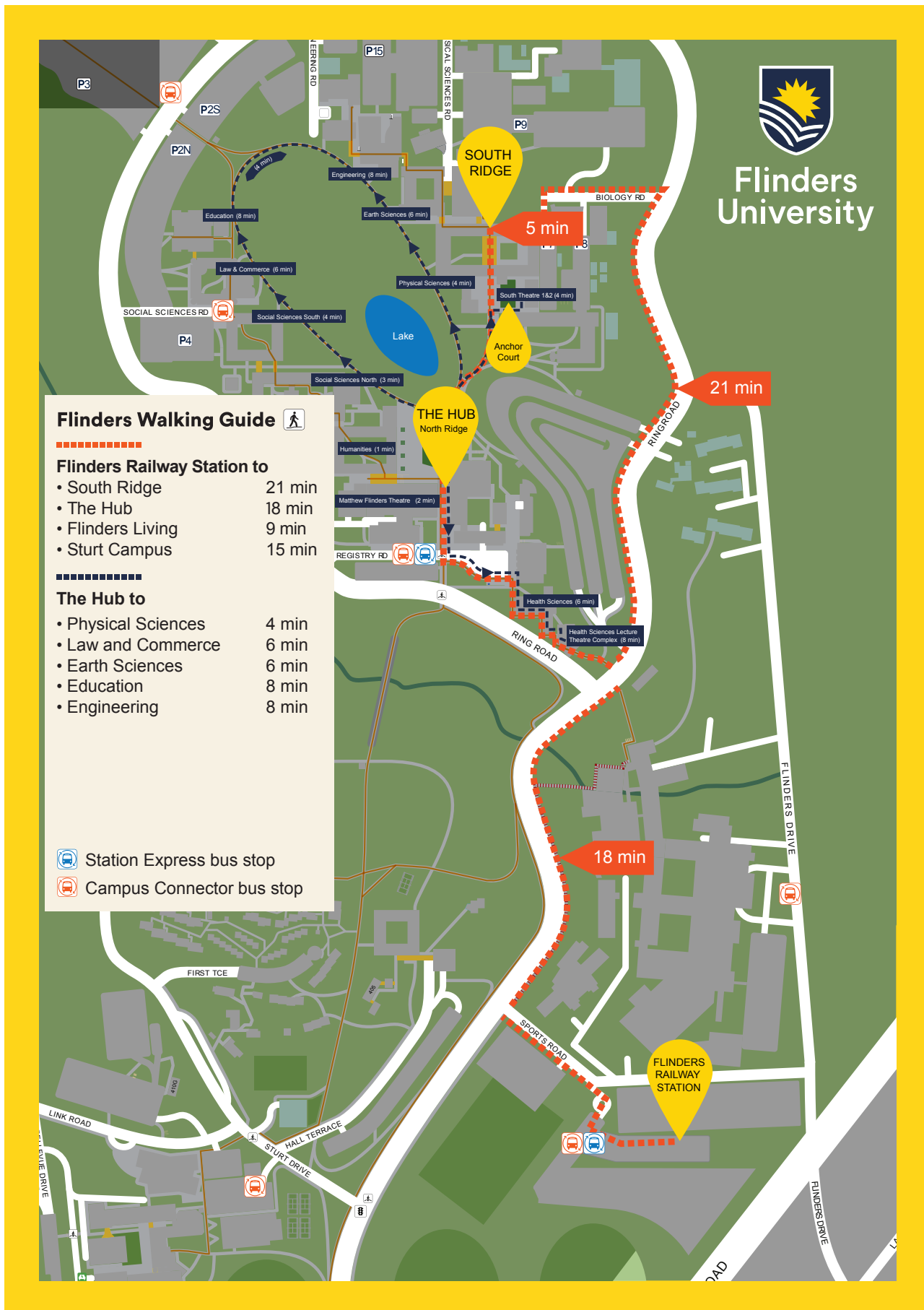
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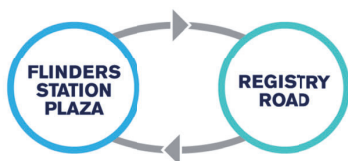
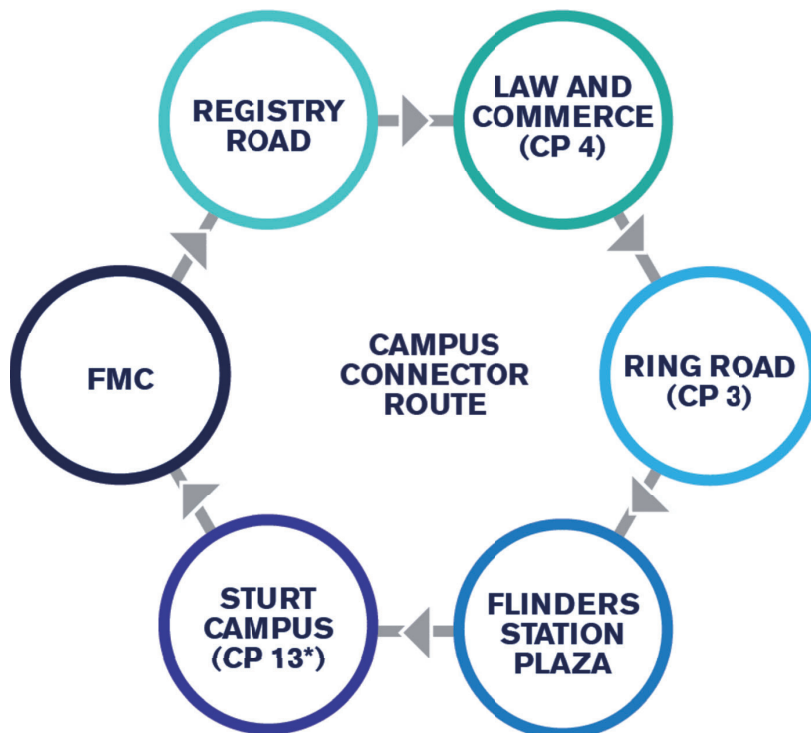
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DURATION		EVENT			
8:00	30 MINS	Registration (with tea/coffee)   Anchor Court			
8:30	5 MINS	Opening Address   <a href="#">Anchor Court</a> Prof. Romy Lawson, DVCS Flinders University			
8:35	20 MINS	Welcome to Country   <a href="#">Anchor Court</a> Uncle Mickey			
9:00	60 MINS	Keynote   <a href="#">South 1</a> Assoc. Prof Jack Wang, University of Queensland			
		<a href="#">Authentic Learning   South 1</a>	<a href="#">Innovation   South 2</a>	<a href="#">Technology   PHYS001</a>	
10:00	20 MINS	<b>Embracing Authentic Learning: Bridging the Gap through an Institution-wide Authentic Assessment Project.</b> Nallaya	<b>Student centred approach to develop self-regulated learning behaviours in undergraduate students using embedded metacognitive prompts.</b> Harrison, Barry, Gaganis, O'Shea	<b>How are our Students Engaging with their LMS? Generating Profiles of Student Engagement using LMS Data.</b> Pinar	
10:20	30 MINS	Morning Tea   Anchor Court			
		<a href="#">Authentic Learning   South 1</a>	<a href="#">Innovation   South 2</a>	<a href="#">Technology   PHYS001</a>	<a href="#">Roundtables/Workshops 1-3 in PHYS003, 4-6 in PHYS004</a>
10:50	60 MINS	<b>Speaking from the heart: Can the oral assessment be embraced as an authentic measure of learning?</b> Nallaya	<b>Content + Context. Theory for teaching and learning social accountability in health care.</b> Whitenbury	<b>How confident are you? Exploring certainty-based marking to support students' development of self-regulated learning skills.</b> Hull, Blythman, Richardson, Sauchelli	<b>1. Fusing Authentic Learning &amp; Interprofessional Education through the use of health care HUDDLE's.</b> Thompson, Charlton, Thirumanickam, Prideaux, Chen
11:10		<b>Evaluating students' problem-solving skills connecting to real-life professional practice and promoting academic integrity.</b> Saqib	<b>Art-led learning: Can looking at art make us better health clinicians?</b> Douglas	<b>The flip side of video learning: Patterns of student engagement with pre-recorded content posted in the course LMS.</b> Korolkiewicz & Gaha Magar	<b>2. How does utilising queer/ feminist pedagogy in a critical literacy curriculum module build students understanding of the power of language and its ability to include/exclude.</b> Brady-Clark

		Authentic Learning   South 1	Innovation   South 2	Technology   PHYS001	Roundtables/Workshops 1-3 in PHYS003, 4-6 in PHYS004
11:30		<p><b>Nature connection, but at a distance: Fostering student wellbeing and nature-connectedness in online learning.</b> Richardson, Le Busque, Pearson</p>	<p><b>How do pre-service teachers view the usefulness of a Professional Learning Community for discussing teaching and learning scenarios?</b> Van Deur</p>	<p><b>Using learning analytics in understanding high-performing students' online engagement.</b> Abadia, Liu, Sun</p>	<p><b>3. Unveiling an Immersive Site Experience in the Teaching and Learning of Quantity Surveying Practice: An Authentic Assessment Design.</b> Jayawickrama &amp; Jayasinghe</p> <p><b>4. A Mathematics Module in Construction Management and its impact on students' learning in Maths-related courses.</b> Hicks, Li, Freda, Abadia</p> <p><b>5. Academic Development as mentoring: possibilities from the field.</b> Boitshwarelo &amp; Aitchison</p> <p><b>6. Impact of the physical learning environment on teaching in higher education.</b> Kitchen &amp; Bailey</p>

		Authentic Learning   South 1	Innovation   South 2	Technology   PHYS001	Roundtables/Workshops
12:00	60 MINS	<b>Modelling STEM Situated Learning at the Zoo to future teachers.</b> Garnett & Rowtcliff	<b>An innovative approach to student co-creation of learning and course design.</b> Chalmers & Daniells	<b>From Clicks to Crisis: A Systematic Review of Stressors Faced by Higher Education Students Studying Online.</b> Mingoia, Skinner, Engfors, Le Busque	<b>1. AI Writing Tools Are Here To Help....</b> Prider & Copeland
12:20		<b>Allows us to make a real impact and contribute to society': Involving Students in Public Advocacy on Contemporary Issues.</b> Koch & Mavrakis	<b>The 7E Model of Enquiry-Based Learning.</b> Wanner & Palmer		<b>2. CATs – The Next Level.</b> Mirzaei & Karim
12:40		<b>Bridging the gap: a largescale Health Science research course connecting undergraduate students, to researchers and future careers.</b> Thompson, Sidhu, Arthur Panagopoulos, Gatford Van Den Heuvel, Page	<b>The Surprising Success of “Netflixing” Tertiary Study.</b> Gray	<b>TEAM- Telepractice Education and Interprofessional Module.</b> Bucher, Weeks, Rowett, Murray	<b>3. Virtual Reality’s Journey to Scaling and Accessibility in Construction.</b> Abadia, Fritsch, Abdelaal, Jayawickrama
					<b>4. Empowering Teaching Academics to Engage in Scholarship of Teaching and Learning.</b> Rogers & Kontra
					<b>5. Redesign process and expansion of an existing undergraduate Medical Science program incorporating industry perspectives.</b> Gaganis & Teaching Team
					<b>6. Leveraging Collective Expertise: University academic staff with discipline specific knowledge as catalysts for enhancing course design.</b> Johnson & Copeland
1:00	60 MINS	Lunch and Migration to Hub   Level 3 Alere			

		Artificial Intelligence/Research   Alere North and South Level 3	Inclusive Education   Noel Stockdale Room (Central Library level 1)	Innovation   Studio 1_2 Hub Ground Floor	Roundtables/Workshops
2:00	40 MINS	<b>How hard can it be? Testing the reliability of AI detection tools.</b> Lee	<b>Rebellious reimagining of a fully online discrete Aboriginal and Torres Strait Islander health course.</b> Cornelius-Bell, Marsh, Watkins	<b>Facilitating engaging and transformative student experiences.</b> Hall	<b>Workshop. Practical advice on implementing a blended learning model.</b> Smallhorn, Young Kirby
2:20		<b>Automating the “Art” of Psychological Measurement.</b> Marmolejo-Ramos, Bulut, Anunciação, Marques, Barthakur, Tejada	<b>A Self-assessment Framework for Embedding Aboriginal Content in the Curriculum.</b> Akbar, Sharp, Baldock	<b>Evaluation of a professionalism skills development task in a Doctor of Medicine program.</b> Barry, Gaganis, Harrison	
2:45	40 MINS	<b>Development, implementation, and evaluation of an interactive oral assessment.</b> Della Vedova, Davey, Sallows, Birbeck, Nallaya	<b>Strengths and Challenges of Neurodivergent University Students.</b> Wyatt, Fairweather, Redpath	<b>How might academic development practices support tertiary educators’ well-being?</b> Strambi, Hobson, Janssen, Baldock	
3:05		<b>Explicit or Implicit Research Skill Development in University Courses?</b> Willison	<b>Effectiveness of online assessments through the lens of students.</b> Mirzaei, Hicks, Hull, Forbes, Rubaiyat, Schmidt, Karim, Jayasinghe, Lacina Diaby, Arya	<b>Grouping students based on learning styles and its impact on students’ academic performance in group assessments.</b> Johnsam, Powell, Moussa, Howley	
3:30	20 MINS	Afternoon Tea			
		Theories   Alere N&S lvl 3	Inclusive Education   NS Room	WIL   Studio 1_2	
3:50	40 MINS	<b>Consensus Marking: Building an Educational Alliance and Fostering Evaluative Judgement.</b> Henderson, Chipchase, Aitken, Lewis	<b>Statistics Anxiety – the devil we ought know!</b> Fewster-Young	<b>Ready, Set, Go! Igniting and Supporting Career Preparation through the curriculum.</b> Young Kirby, Koeper, Tan, Hunter	
4:10		<b>Embedding reflexivity in teaching and learning: A community of practice approach.</b> Hickman & Wilson	<b>Experiences of medical students in a novel participatory music elective.</b> Sitoh, Orchard, Wyatt, Moore	<b>A WIL-ing heart; When the original yellow wiggles joins online classes for authentic work-integrated learning.</b> Burley	
4:30		Close, Prizes and Drinks   Level 3 Alere			



## Jack Wang

University of Queensland, Brisbane

Associate Professor Jack Wang completed a dual degree in Science and Information Technology in 2006 and went on to a PhD at the Institute of Molecular Bioscience, UQ, to study the interface between molecular bioscience and microbiology. Jack has applied his research background towards Microbiology teaching, and his educational research revolves around interactive inquiry-driven learning, as well as measuring the impact of blending online and face-to-face learning activities in large undergraduate courses. His work has been recognized through national teaching awards, and in 2020 he was awarded the Australian Society for Microbiology David White Teaching Excellence award, the Australian Awards for University Teaching (AAUT) Award for Teaching Excellence (Biological and Health Sciences) and was named the 2020 AAUT Australian University Teacher of the Year.

Assoc. Professor Wang's laboratory research focuses on understanding key host biological processes exploited by pathogens to infect and colonise mammalian cells. These experimental investigations revolve around direct visualization of biological processes using both fixed and time-lapse fluorescent microscopy as well as computational algorithms to process and analyse the data collected.

He has applied his research background towards an interdisciplinary approach to Microbiology teaching, and his current educational research as a teaching-focused academic in Microbiology revolves around the integration of interactive inquiry-driven learning into large undergraduate courses, as well as the impact of novel education technologies on assessment and feedback. This research aims to address the impact of blending online and face-to-face learning activities in large undergraduate courses, as well as improving the technological and communication competencies that serve as transferable skills for our graduates. One key outcome of this work is the development of an online repository of laboratory skills training videos that can be deployed across different educational contexts. This research is carried out through multiple UQ collaborations and has been funded by the UQ, the Office of Learning and Teaching, and the Australian Council for Deans of Science.



# The Future of Professional Learning? Teachers for the Digital Age.

**Associate Professor Jack T.H. Wang**

School of Chemistry and Molecular Bioscience, University of Queensland

### ABSTRACT

Video-based learning is built upon Mayer's multimedia theory of learning (Mayer & Moreno, 2003), which emphasises the value of flexible communication skills to lower the burden of cognitive load for diverse student cohorts. Leveraging online multimedia for education lies at the intersection between pedagogy and technology, but the production of high-quality online resources has significant resource implications (Rasheed et al., 2020).

This project evaluated large undergraduate science courses that embedded over 100 hours of video content from 2020-2022 to determine best-practice guidelines for producing effective online multimedia (Chan et al., 2022).

Student survey and interview results (n= 74, 16.8% completion) revealed broad agreement with the value of segmenting information (Fiorella & Mayer, 2018), instructor presence (Mayer et al., 2020), and mixed perspectives in educational videos (Boucheix et al., 2018). However individual student preferences varied on the extent of instructors' on-screen visibility, use of graphics, and subtitling.

Learning analytics revealed a decrease in viewer retention as each video progresses, but this rate of decline can be slowed through on-screen text, animations, and camera angle changes. Together this data provides an evidence-based framework for designing educational videos and informs professional learning strategies for institutions looking to find balance between physical and virtual learning environments.

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## Invited Workshop Speaker: Jason Lodge



Associate Professor Jason Lodge's research concentrates on the application of the learning sciences to education. Specifically, he is interested in the cognitive and emotional factors that influence learning and behaviour and how research findings from the learning sciences can be better used to enhance design for learning, teaching practice and education policy. Jason is also interested in the ways technologies such as artificial intelligence is influencing learning, particularly in terms of the impact of technology on the development of professional ways of being, metacognition, critical thinking and expertise.



# Modifying assessment tasks to ensure learning occurs in the era of artificial intelligence.

Jason Lodge<sup>1</sup>, Edward Palmer<sup>2</sup>, Michelle Picard<sup>3</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>University of Adelaide, <sup>3</sup>Flinders University

## ABSTRACT

AI has had a significant impact on many industries over the last few years including architectural design (Bölek et al., 2023), visual arts (Caramiaux & Fdili, 2022;), customer service (Song, et al., 2022) and marketing (Mehta et al., 2022; Vlačić et al., 2021). Since the launch of ChatGPT 3.5 late in 2022 there have been reports in the literature that this AI tool can pass legal (Choi et al., 2023; Mazurek, 2023) and medical (Humar, 2023) exams, provide answers to most questions posed in education and has been either banned or explicitly acknowledged as an issue that is of critical importance in schools and higher education institutions.

Whilst staff and students may not be universally aware of the capacities of AI, leadership of institutions have been working to consider the ramifications of AI tools in the learning space (Malinka et al., 2023). Staff have been left to deal with the use of AI in assessment tasks, often with little guidance or sufficient digital skills to make relevant changes or modifications. University systems also run at a slow pace meaning that policies, course and program changes are not able to engage at the rate staff need in order to respond to this new technology.

AI generated text is created through a process of data harvesting and many clever algorithms which examine a large database for likely answers to questions posed of it. ChatGPT (OpenAI) behaves like a chatbot on the surface and has a text window in which users can type questions. The response to this question is vastly different than what you might encounter in a typical search engine, providing clearly articulated text written in good English, similar to the dialogue you might genuinely expect from a human. Whilst ChatGPT does not 'know' what it is writing in the same way we do, it has been trained to mimic a human (Ariyaratne et al., 2023). It is relatively easy to subvert AI detection tools such as those in common tools in higher education such as Turnitin. We need to focus on learning (Al-Husseiny, 2023) rather than 'catching' violations of academic integrity and to do that our focus must be on assessment.

In this workshop we will engage with common assessment types and assess how 'broken' they may be in our courses when students have access to AI. Participants will work in groups, first to analyse the potential weaknesses of a task, identify what learning outcomes the task aims to measure and then create a new task that will not have those weaknesses. We will use the SAMR (Substitution, Augmentation, Modification, and Redefinition) approach to frame the changes made to the assessment tasks.

Specific learning outcomes are that participants will be able to:

1. Analyse existing assessment tasks with an understanding of how AI might subvert the intention of the tasks,

2. Demonstrate the use of SAMR in examining and changing assessment tasks, and
3. Design different assessment tasks to embrace or resist AI that ensure learning.

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# Abstracts

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# Abstracts



### Embracing Authentic Learning: Bridging the Gap through an Institution-wide Authentic Assessment Project.

**Shashi Nallaya**

University of South Australia

#### ABSTRACT

The call for authentic learning experiences in Higher Education (HE) has surged in many parts of the world due to factors such as regulatory body recommendations, graduate employability challenges, decreasing student engagement and increasing academic misconduct. Authentic learning pedagogies have 10 design elements that contribute to student experiences namely, real-world relevance, ill-defined problems, sustained investigation, multiple sources and perspectives, collaboration, reflection, interdisciplinary perspectives, integrated assessments, polished products and multiple interpretations and outcomes (Lombardi, 2007, pp. 3-4). The premise that motivated the launch of the Authentic Assessment Project (AAP) in the University of South Australia (UniSA) in 2022 was that students will engage in authentic learning. The aim of the project was to realise Action 2.2 of Strategic Priority 2 of UniSA's Academic Enterprise Plan (AEP) 2021-2025, Leading with our programs. This action recognised that authentic assessments would impact on authentic learning experiences through washback effect. The project was directed by deliverables across four main streams, namely 1) Authentic Assessment Network; 2) Assessment25; 3) Implementation; and 4) Policy Update. Distributed leadership spearheaded this project nurtured by a context of trust, culture of respect for expertise, and recognition that change and development will occur across different levels of leadership (Wood et al., 2004, pp. 448). As Academic Developers (Ads) are perceived as power holders linked to expertise, institutional management and policies (Stensaker et al., 2017), they were instrumental in supporting this project.

This presentation focuses on the findings and implications of an evaluation undertaken to identify the success of the AAP using Schon's (1987) reflective practitioner model. Mixed-method research design was employed to investigate: 1) What strategies were implemented by ADs to lead the AA initiative? and 2) How, and in what ways, have authentic learning practices been taken up by academics across the institution? Our investigation included collecting and analysing data such as comments made by academic staff relating to change in practice, level of engagement in various AA events organised by ADs, and number of references made to authentic learning and assessment. The findings suggested that the AAP has motivated academics in UniSA to reflect on their teaching activities and assessment practices to incorporate authentic learning.

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## SESSION ABSTRACT

### Student centred approach to develop self-regulated learning in undergraduate students using embedded metacognitive prompts.

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#### ABSTRACT

##### Background

One of the challenges faced by students in their transition to university is the need for the rapid acquisition of skills enabling them to become autonomous and self-directed learners. Self-regulated learning (SRL) is a term that describes how individuals master their learning processes and outcomes. Self-regulated learners are active participants in their own learning and utilise cognitive and metacognitive processes to plan, monitor and evaluate their performance.<sup>1</sup> For some students, SRL skills are well developed when they begin their university studies, while for others deficiencies in these skills can leave them inadequately prepared to cope with the demands posed by tertiary study placing them at greater risk of attrition and poor academic success.<sup>2</sup> Studies have shown that while students need to be proactive in the attainment of SRL behaviours, SRL can be facilitated through instruction, modelling, and assessment design.<sup>3,4</sup> Despite the evidence that SRL can be taught, it is not often a priority in curriculum design within university settings.

##### Methods

This study examines the introduction of meta learning tasks into first- and second-year undergraduate physiology topics in a higher education setting. Meta-learning tasks are short assessment pieces comprising sets of open-ended questions that direct students to (1) reflect on the processes by which they learn, including the resources they utilise, and their effectiveness (2) identify gaps in their knowledge and develop plans to rectify this (3) set learning goals and (4) consider how they seek help and utilise feedback provided to them. By prompting students' reflection of their learning strategies and approaches, these tasks aim to promote the development of SRL behaviours and improve academic outcomes. Outcome measures included qualitative responses, student grades, student satisfaction and demographic variables.

##### Results

Analysis indicates differences between students across differing grade band levels in their planning abilities and strategy selection for overcoming challenging concepts. Differences are also observed between students studying different disciplines and across varying student demographics.

Most students from both the first- and second-year topics (79% and 83% respectively) reported meta-learning tasks are beneficial. Student evaluation data demonstrated increased student satisfaction and decreased topic fail rates following inclusion of meta-learning tasks.

##### Conclusions

Curriculum design and educational practice to enhance SRL is important to foster academic success for students and promote equity in higher education.

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### How are our Students Engaging with their LMS? Generating Profiles of Student Engagement using LMS Data.

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#### ABSTRACT

**Background:** With the growing popularity of hybrid and online educational platforms, this study aims to explore how students are engaging with Learning Management Systems (LMSs) for their learning (Gupta, Muralidharan, & Raghavan, 2021; Henrie, Halverson, & Graham, 2018; Conijn, Snijders, Kleingeld, & Matzat, 2017). Traditionally, studies investigating the utility of mining LMS data to predict student performance using predictive modelling, strongly vary across courses (Conijn et al., 2017). Thus, the portability of prediction models across courses, both within, and across institutions is low. The present study proposes a move away for traditional regression/prediction models, to a more novel approach using clustering analyses.

**Goal/s:** Employing data mining techniques, we investigate the potential of LMS student activity data to generate student engagement profiles and predict academic performance (Romero & Ventura, 2013; Tempelaar, Rienties, & Giesbers, 2015; Conijn et al., 2017).

**Methods:** We collected LMS activity data throughout a semester for 534 undergraduate students in a blended biomedical science subject. The subject comprised of traditional, in-person teaching activities and an online LMS. This data includes metrics such as lecture recording views and downloads, average time spent viewing lectures, page clicks, course and content page clicks (e.g., lecture lessons), discussion forum posts and views, as well as formative quiz attempts and reviews (Wang, Chen, & Anderson, 2019; Conijn et al., 2017). We used K-means cluster analysis to create student engagement profiles based on this digital LMS data. Furthermore, linear regression and ANOVA were employed to predict academic performance using student activity measures.

**Findings:** Our study demonstrates the value of LMS log data in constructing student engagement “profiles” and identifying predictors of academic performance. Notably, the average time spent viewing lecture recordings emerged as a significant predictor of academic success, in-line with existing literature (Conijn et al., 2017). The results of our clustering analyses revealed three distinct clusters, or ‘profiles’ of student engagement, each representing key differences in student engagement activity. Greater homogeneity in student engagement behaviour was found within clusters, and greater heterogeneity between clusters.

**Impact:** This research sheds light on the evolving ways in which students engage with LMSs for learning. As blended/hybrid approaches to education gains momentum, adopting evidence-based approaches, as showcased in this study, will enrich and inform teaching practices (Jovanović, Gašević, Pardo, & Dawson, 2020; Ullmann, Wild, & Scott, 2018; Conijn

et al., 2017). Furthermore, understanding the variations in student engagement with LMSs will aid in developing teaching resources that align better with and complement online learning behaviors (Dyckhoff, Zielke, Bültmann, Chatti, & Schroeder, 2013; Conijn et al., 2017).

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### Speaking from the heart: Can the oral assessment be embraced as an authentic measure of learning?

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#### ABSTRACT

Assessments play a central role in any educational environment as they influence how students will engage in the content and activities. Through the washback effect, assessments can identify whether the learning outcomes have been achieved and the teaching and learning activities have developed students' skills to successfully complete the assessment tasks. Standardised assessments do not provide opportunities to assess students' true ability to undertake and solve real world challenges (Pereira, Flores & Niklasson, 2016). Wiggins (2011, p. 84), one of the advocates of authentic learning and assessments argued that the "true test of ability is to perform consistently well [in] tasks whose criteria for success are known and valued".

Assessments that demonstrate this are deemed authentic assessments, i.e., tasks that resemble problems that exist or emulate those in a discipline or the real world. More recently, the oral assessment (OA) has taken precedence as a form of authentic assessment used both in formative and summative contexts (Sutherland et al. 2019), after gaining recognition for its ability to assess students' deep understanding and knowledge, critical thinking and reduce the likelihood of academic misconduct (Salamonson et al. 2016). The OA also allows examiners to interact with students to identify their strengths and distinguish between superficial knowledge and deep understanding (Pearce and Lee 2009).

This presentation reports on a systematic review undertaken with the Cochrane Collaboration Guidelines to explore the validity and reliability of OAs as a form of authentic assessment. The systematic review also explored the OA's capacity to reduce academic integrity breaches. A total of 2,657 journal articles from ERIC, Web of Science, Scopus and A+ Education databases were imported into Covidence for screening of titles, abstracts and full texts. Seventeen studies were deemed suitable for inclusion in the systematic review.

The analysis identified that the validity, reliability and capacity of the oral assessment to reduce academic integrity breaches were dependent on whether it has been designed, scaffolded and implemented well. The review also suggested that student anxiety, which is commonly associated with the OA did not significantly impact on their performance.

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### Content + Context. Theory for teaching and learning social accountability in health care.

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#### ABSTRACT

Existential crises in late modernity arguably change the 'rules of the game' [1] of medical professionalism that decide physicians' modes of practice. Intensification of the global ecosocial production of health, resulting in a high prevalence of psychosocial illness, now justifies recontextualizing curriculum [2] to prioritise health concerns in pluralist societies that complexly and inequitably impact people's wellbeing.

The author's study sought South Australian medical students' perceptions of a medical professional charter requiring greater social accountability in health care [3]. Analysis found curriculum discourse regulation of stated biopsychosocial (Adelaide) and socially accountable (Flinders) medical programs was weak. Students with multiple social equity identities can have embodied cognition of how social structures maldistribute health but few aspire to practice in underserved areas [4]. Most participants voiced 'emotional empathy' for disadvantaged groups but require greater 'cognitive empathy' to strategise equitable health outcomes [5].

'Reform without change' [6] typifies past attempts to modify the dominance of biomolecular science in medical education, to instead diversify 'whose social speaks' in curriculum [7]. Recontextualization of medical practice to meet emerging health needs can benefit from learning biosemiotics [8], a holistic socio-science theory, with values instruction of the social relevance of medical knowledge managed with Legitimation Code Theory approaches [9]. This paper will interest educators wanting to transform student' perspectives and practice orientation to pressing societal and ecological issues.

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### How confident are you? Exploring certainty-based marking to support students' development of self-regulated learning skills.

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#### ABSTRACT

UniSA Online (UO) delivers asynchronous online learning offering significant flexibility for students. With this flexibility comes an increased responsibility for students to regulate their own learning – a skill that is not well-developed in all commencing students. Self-evaluation and appropriate help-seeking are key self-regulated learning (SRL) skills (Panadero 2017) that support student success in online learning, often demonstrated through students evaluating the quality of their work and developing support strategies. However, research suggests students studying complex topics online struggle to self-regulate their learning and, without SRL support, are unable to gain in-depth conceptual understanding (Azevedo & Hadwin 2005).

In asynchronous learning environments including UO, processes of self-review together with automated feedback are an increasingly important mechanism for formative self-reflection for students. UO student feedback regularly highlights the value placed on opportunities to engage in formative 'knowledge check' reflection. Yet these typical feedback mechanisms do not always lead to students developing SRL behaviours and skills needed for future success in their studies. Consequently, future teaching technologies must consider leveraging existing practices of 'knowledge check' formative activities to intentionally incorporate reflective opportunities to aid students' SRL development, while also considering staff time and resources (Perisco et al 2020).

A pilot study was conducted using Certainty Based Marking (CBM; Gardner-Medwin 1995) 'confidence check quizzes' with in-built automatic feedback. CBM is a Moodle quiz tool extension. When activated, students answer a content question as usual, then a secondary question summarising their confidence about the correctness of their answer (Hendriks et al 2019). The combination of confidence scores alongside correct/incorrect results provides opportunities to supplement typical automated feedback with further SRL recommendations (Hendriks et al 2019).

The current pilot was tested in two first-year UO courses to examine a) the effect CBM activities supplemented with SRL strategies have on student confidence and engagement in formative learning activities and b) student perceptions of this tool. This presentation will share key insights gained from the implementation phase, including how to best overview, support, and engage novel student users who do not have traditional face-to-face support. Considerations for introducing and explaining the tool, examples of visual and written feedback for possible confidence outcomes, patterns of student engagement, and programmatic approaches will be discussed.

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# Evaluating students' problem-solving skills connecting to real-life professional practice and promoting academic integrity.

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## ABSTRACT

In accounting and finance courses, the challenges are associated with mirroring the real-life working career. In professional practice, each client's financial circumstances are unique. One solution does not perfectly fit all client's financial problems. And for employees, each task brings new business challenges. Secondly, encountering calculation-based assignments that have mostly one correct resulting answer. Authentic learning can be undermined as it creates opportunities for students' collusion and sharing of answers. The text-matching software Turnitin cannot identify potential misconduct for mathematical assessment tasks (Seaton, 2019). Thus, the purpose of the assignments is to contextualise the assessment within the finance discipline (Cumming et al., 1999) by generating a unique set of case study scenarios for each student.

UniSA Online Business Finance course is delivered within a 100% asynchronous environment in the second-year undergraduate accounting program. The course assignments assess students' theoretical knowledge via discussion questions and problem-solving skills via analysis questions. For the theoretical questions, the client report (in MS Word format) remained equivalent to the on-campus course version. However, the intervention was applied to the calculation-based investment analysis of scenarios to mirror real-life financial management practice. This not only promotes academic integrity but also exhibits validity in measuring students' acquired financial knowledge and skills (Ashford-Rowe et al., 2014).

The Excel spreadsheet, a freely accessible application of Microsoft 365, was programmed to produce multiple personalised scenarios. This approach shifts the focus of student collusion towards authentic learning - discussion around the processes or analysis methods when solving complex assessment problems rather than copying the resulting numerical values.

The teaching team scaffolded the learning of Excel for financial analysis by demonstrating complex examples during the Zoom sessions and sharing resources (Hui et al., 2011). The student experience surveys showed an increase in student satisfaction. 83% students agreed the assessment items assisted their learning of the content over the two offerings. To address the difficulties in the marking process, each time a new problem is marked compared to the unique model answer, an effective rubric with descriptors was integrated.

It is proposed that there are opportunities to curate this assessment method for other courses involving complex calculations by utilising Excel's potential for generating synthetic data and writing personalised questions. While external artificial intelligence tools such as ChatGPT can perform similar tasks, they do so by compromising the confidentiality of academic material.

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## Art-led learning: Can looking at art make us better health clinicians?

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### ABSTRACT

#### Introduction

Art-led learning is an engaging learning and teaching methodology that has been found to promote critical thinking skills, empathy, cultural safety practices, teamwork, clinical observation skills and acceptance of diversity of thought (Monahan et al., 2019; Obara et al., 2022). Healthcare students are supported to become reflexive clinicians and to provide meaningful person- and family-centred care to patients across the lifespan continuum. The use of art in learning also engages students in to be active participants in their learning and inspires an improved sense of well-being and improved levels of self-awareness (Hartigan-Rogers & d'Eon, 2023).

#### Method

Art-led learning was incorporated into the Flinders University Bachelor of Nursing first-year topic "Communication for Nursing," in consultation with the Flinders University Museum of Art (FUMA). 12 artworks were selected from the 8,000 pieces within the collection and used in both in-class activities and as part of a group assessment. Students participated in activities based on experiential learning practices of observing thoughts, feelings and reflections when interacting with each artwork (Tomkins & Ulus, 2016). Groups were formed based on students choosing different artworks to each other to promote discussion based on diversity of thought.

#### Discussion

Students' 'buy-in' to the art led learning activities were related to their understanding of how the principals were linked to developing clinical and professional skills, hence it was imperative for tutors to provide context and anecdotal examples from their clinical experience during the debriefing. The use of art as an icebreaker to group discussion was effective providing students with neutral objects outside of themselves to concentrate their observations on and communication with one another. Students were observed to engage with one another in authentic ways, leading to strengthened team connectivity. A literature review of arts-based pedagogy identified that art-led activities can inspire enhanced learning of values such as care, empathy and compassion (Obara et al., 2022). These developing skills were witnessed by students showing their peers support and care when faced with difficult circumstances inspired a sense of well-being and improved levels of self-awareness.

#### Conclusion

Students displayed active learning in communication skills and applied the concepts of person- and family-centred care to through the use of art and associated activities in the classroom. Improved learner engagement and team connectivity was observed, supporting professional development towards becoming holistic and reflexive clinicians.

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### The flip side of video learning: Patterns of student engagement with pre-recorded content posted in the course LMS.

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#### ABSTRACT

The COVID-19 pandemic has forced university instructors to rethink the design of their courses. Sometimes out of necessity and sometimes through innovation, courses previously delivered in traditional face-to-face mode now include online components. This paper focuses on one such first-year 'quantitative methods' course for health sciences students that was re-designed as a flipped classroom model with pre-recorded, segmented lecture content in place of in-person lectures.

The flipped classroom model moves teacher-centred instruction out of the classroom freeing up time for more student-centred activities. It has been shown to be beneficial for student learning and academic success (Låg & Sæle, 2019). Students may be inclined to take a more active role in their own learning process compared to traditional direct instruction. Further, video presentations of course content give students a sense of control which can improve motivation (Latorre-Cosculluela et al., 2021). Videos also allow students to manage their own cognitive load by pausing to take notes, rewinding difficult sections, or accelerating easy ones (Noetel et al., 2021). There is sufficient evidence to say these approaches work, but how do students actually interact with content videos?

In this paper, Panopto log data (views, downloads, length, percent completed) is used to understand patterns of students engagement with content videos, made available each week through the learning management system. It appears that engagement is highest at the start of the course, followed by a drop after the mid-break, increasing again in the week leading up to the exam, a pattern which could be due to students becoming overwhelmed with the assessment load across all their courses. Our analysis of video log data also shows that most students have watched some of the videos, while a smaller subset of students have watched all the videos available. To further explore the patterns, K-means clustering was used to group students into clusters based on levels of engagement with content videos. Three clusters were identified, characterised by high, medium or low engagement with weekly video content.

Due to the increased learner autonomy in the flipped classroom model, self-regulated learning (SRL) behaviour is required of students and our results confirm that additional support needs to be provided to allow students experience full benefits of flipped and video learning (van Alten et al. 2020).

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# Nature connection, but at a distance: Fostering student wellbeing and nature-connectedness in online learning.

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### ABSTRACT

Fostering strengthened human-nature relationships is beneficial for both the physical and psychological health of people, as well as the planet through driving more sustainable human behaviour (e.g., Martin et al., 2020; Pouso et al., 2021). An important contemporary area in which to apply psychological knowledge and methods focuses upon the relationships between humans and the natural world (Clayton & Brook, 2005). So, when tasked with designing a brand-new course in alignment with these goals, that must be taught entirely online, we knew authentic learning and assessment would need to sit at the heart of the design.

This presentation will detail the development, and evaluation, of an innovative first-year course 'Connecting and working with Nature'. This course was designed primarily for students within the UniSA Online Psychology degree, but open to enrolment for students across all disciplines. The curriculum was designed with a dual emphasis on the development of theoretical understanding regarding the benefits of nature contact and psychological connectedness with nature for people's health and well-being alongside the application of this learning in personal and professional contexts.

The emphasis on theory and application is evident in both the course learning outcomes, and in the ways the assessments were designed and implemented across the course. A consistent weekly structure was used across the course with four streams: Theories and Evidence, Professional Applications, Nature Connection Practices and Reflections and Sharing. The nature connection practices were designed to guide students in taking theories and evidence from the course and out into the real-world, providing an experiential element. The professional applications stream sought to further illuminate how the nature-connection knowledge and emerging evidence-base can support future professional practice in a range of sectors and professions.

In evaluating the course, we explored how the application of learning, in both personal and professional contexts, influenced students. Through surveys and focus groups with students and staff we evidenced the benefits of such authentic learning practices, with data supporting the course enhanced students' levels of contact and psychological connectedness with nature, and subjective well-being (Ryff & Keyes, 1995). Moreover, it fostered students' ability to apply their learning to the improvement of their own lives and built skills to self-manage well-being into the future. Moving beyond theory to application in first-year courses and providing students with more authentic learning opportunities can be transformative, even online and at a distance.

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## SESSION ABSTRACT

### How do pre-service teachers view the usefulness of a Professional Learning Community for discussing teaching and learning scenarios?

**Penny Van Deur**  
Flinders University

#### ABSTRACT

This small study is underpinned by social-cognitive theory that recognizes the influence of personal, social and environmental factors on pre-service teachers' beliefs and actions. The purpose of this study was to do a preliminary exploration of the views of pre-service teachers (PST) about the usefulness of a Professional Learning Community approach for discussing classroom scenarios relevant to their study of weekly topics in a topic focused on educational psychology.

The PST wrote reflections on insights they gained through group discussion of five scenarios and online research conducted during the PLC. They reflected briefly on the group process of working together in a PLC, and on the way the PLC process and knowledge gained might influence their actions as teachers. The first and final text reflections on the PLC submitted as part of the topic assessment were collated from 68 PST in three classes (two classes of secondary PST and one class of primary PST). Data were inspected and analysed using inductive coding methods.

In the first reflection, PST commented that the PLC was valuable for group discussion; they talked about being able to distribute research tasks to group members and outlined how they had developed a shared document. They discussed the way the knowledge gained might influence their actions as teachers in terms of scaffolding students' learning and using prompt cards to develop students' agency.

In the final reflection, students described how PLC members agreed on ideas, helped each other understand ideas and outlined the value of being able to use technology to research, connect and collaborate and commented that their online group chat helped those absent from class. When discussing how the knowledge gained might influence their actions as teachers they described the importance of making links in their teaching with real-life situations and using strategies such as concept mapping and debating to help students exchange ideas.

This investigation into a PLC as a way researching issues through a team approach could be of value to others involved in teacher education and possibly academics in other disciplines as well.

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# Using learning analytics in understanding high-performing students' online engagement.

**Rhodora Abadia, Sisi Liu, Qiaoling Sun**

University of South Australia

### ABSTRACT

Learning analytics is often associated with modern technology due to its reliance on digital tools and data analysis techniques. It is suggested that learning analytics has the potential to offer educators with better insights into student learning and use of limited teaching resources (Clow, 2013). The integration of technology in education has significantly expanded the capabilities of learning analytics, enabling educators and institutions to gain deeper insights into student behaviours, performance patterns, and instructional effectiveness.

With the popularity of online learning and the advancement of data mining techniques, Learning Management Systems (LMS) have been developed and implemented by various online education providers in online courses to automatically record students' engagement and performance data. It is reported that using LMS data to support learning analytics and educational data mining provides a more objective picture of students' learning through data-driven approaches (Liu et al., 2017).

Research on understanding student high academic performance focused on studying students in a traditional classroom or blended learning environment. In this presentation, we will present key online engagement behaviours of students that contribute to achieving high academic performance. High performing students refer to those achieving a distinction or high distinction. The study experimented on three years of data derived from online students' academic performance and online course engagement in a series of six computing courses.

Patterns discovered in this study indicate that most of the high performing students in the online introductory programming courses continue to be high performing in their succeeding online computing courses compared to the non-programming courses. The results also show that the more programming experience, the students' performances improve. In addition, students with the highest academic performance engage at least 100% more in online formative learning activities compared to non-high performing students. Their highest activity engagement behaviours were on forum views and quiz activities.

Findings of this study will assist educators in identifying critical elements in their content design to help all types of students increase their scholastic performance, better engage online students, and elevate non-high performing students to narrow the gap in students' performance in online courses. Finally, this study can help educational institutions identify what needs to be improved in the current learning analytics tool to better model student behaviours and patterns.

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# Modelling STEM Situated Learning at the Zoo to future teachers.

**Timna Garnett & Shaileigh Rowtcliff**  
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## ABSTRACT

The zoo is a unique learning environment and in taking our pre-service teachers to the zoo since 2022, we have used a situated learning theory as a way to model future teachers' practice in planning STEM learning in real-world places (McCormas, 2014, p. 98). And yet the practice of situated learning is not commonly identified as part of initial teacher education (ITE) programs in Australia as a measurable way of connecting future teachers of STEM to learning through and in real-world authentic learning contexts.

We acknowledge that as teacher educators we "face the need to design and provide teacher education programs that prepare teacher candidates to be able to adopt this changing context of STEM education" (Ryu, 2019, p. 494). Inspired by the work of Patrick et al. (2013) and building on recent research into in-service teacher PD one-day model learning at the zoo (Garnett, 2022), we designed a 3-day model as our Scholarship of Teaching and Learning (SoTL) practices to work across our STEM education workshops in Science, Technologies and Mathematics for Early Years and Primary courses.

This presentation will highlight the importance of the location and value perceived by our pre-service teachers in being prepared to teach STEM outside the school classroom. The results were obtained using a mixed methods Action Research model including pre- and post-zoo visits surveys and content analysis of reflective statements from one year ( $n = 81$ ) across Mathematics and Technologies topics. The preliminary results highlight that situated learning at the zoo is valued by 69% of students (pre-visit) and increased to 76% (post-visit) as a valuable way to think, plan and teach STEM education which is statically significant (pre-post) ( $p = 0.047$ ).

These findings are supported by their written reflective statements submitted four weeks after the zoo visit and highlight their thinking and connection to the experience. These findings inform the first part of a planned cyclic SoTL 3-year project. We aim to contribute to the growing field of situated learning for STEM education by continuing to use the zoo with our future teachers, highlighting ways the zoo environment can be used in preparing teachers to think, plan and teach STEM education meaningfully.

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# An innovative approach to student co-creation of learning and course design.

**Robert Chalmers, Simone Daniells**  
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## ABSTRACT

We engaged in a constructivist[1] redesign of a post graduate fully online course that satisfies the knowledge requirements for admission to legal practice. To guide this we did a comparative review of equivalent programs and interviewed students and staff to understand experiences and areas for improvement, employing the design thinking and innovation practices that we teach and have used in professional practice.[2] Our work exemplifies a student responsive approach that creates a sustainable model and culture of innovation. Our work is innovative in the depth and rigour of its process to gather and analyse student needs, co-create solutions and test those with students, and it is this aspect (described in the next paragraph) which we will focus on in our presentation as it may be of most use to others interested in using similar approaches.

Students were interviewed individually about their course experiences. Key insights were compiled and distilled using <https://miro.com/> to identify 'student drivers', 'unmet needs', 'pain points' and 'delights'. Issues included a need for improved course induction and learning support; easier navigation of the online learning environment; greater consistency in look and feel of topics; improved connectedness to fellow students, mentors and the profession; opportunities to gain or improve practical skills; and more personalised attention. We also engaged with administrative colleagues to build a better understanding of the student journey.

We made changes to address issues found in the review. This included topic and assessment changes, improved course guidance from entry to exit, strengthened connectedness for students, and increased opportunities to engage with practitioners, and a new topic format that all respond to specific student views. Listening to and talking with students led to a virtuous cycle of listening, changing, and communicating: unexpected positive outcomes are exemplified by a final year student volunteering to assist future students.

We also embedded a systematic approach to gathering feedback and acting on it to ensure continuous improvement. This includes interim checkpoints tailored to learning objectives in topics and graduate qualities, rather than relying on Student Evaluations of teaching.

We reflected on our own roles in providing a smart learning environment for students, and our experiences in our reform efforts. We reported to management, including recommendations on induction and training for course support roles, improved information systems access, and a clearer picture of the student journey and the roles of other parts of the University in assisting that journey. We then shared these findings by invitation more broadly.

We conclude that thorough application of design thinking approaches yields strong results for improving the effectiveness of teaching and learning for students. This includes a need to look broadly at the student journey beyond the teaching engagement, to better understand current weaknesses and cultivate strengthened approaches.

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[2] Gilbert, Crow, Anderson 'Design Thinking for Higher Education'; Stefanie Panke 'Design Thinking in Education: Perspectives, Opportunities and Challenges'; Luka, 'Design Thinking in Pedagogy'; Moffett 'Five tips for using design thinking to transform your academic practice' <https://www.timeshighereducation.com/campus/five-tips-using-design-thinking-transform-your-academic-practice>



## From Clicks to Crisis: A Systematic Review of Stressors Faced by Higher Education Students Studying Online.

John Mingoia, Erin Skinner, Laura Engfors, Brianna Le Busque

University of South Australia

### ABSTRACT

It is well-established that higher education is a stressful environment for students, with most students experiencing stress in some capacity during their education (Robotham & Julian, 2006). This is problematic as stress can lead to adverse student outcomes including lower academic successes, degree discontinuation (Pascoe et al., 2020), and adverse wellbeing outcomes. Regarding the latter, Saleh et al. (2017) found most higher education students reported living with psychological distress, anxiety, and depressive symptoms. Exacerbated student wellbeing further impacts tertiary education providers as such instances place greater demand on university mental health services (Thorley, 2017). Therefore, understanding the sources of stress is an important step in reducing the stress experienced by students.

While prior research provides a useful foundation of the stressors experienced in higher education (e.g., Robotham & Julian, 2006), there is limited research investigating whether these factors are consistent with, or relevant to, online university students. Online higher education course enrolments have been increasing significantly, with this trend intensified by the COVID-19 pandemic. Given the increased demand for online education and its potential for unique stressors, it is essential to identify common stressors experienced by students studying online to support the wellbeing and academic success of this growing cohort. Therefore, a systematic review was conducted in the present study to identify the key stressors experienced by online higher education students.

This review analysed 68 articles published in English between 2001 and 2022, retrieved from ERIC, Web of Science, and PsycInfo. Studies were eligible for inclusion if they measured stressors of students in a completely online environment, while studies measuring hybrid (e.g., blended) course delivery and historical methods not commonly used in 2022 (e.g., CD-ROM) were excluded. Samples covered a range of study disciplines, including STEM (32%), health (27%), arts (24%), education (16%), and social sciences (15%).

The most frequently reported stressors for online students were internet and technology (e.g., poor connection), course delivery (e.g., overwhelming workload), staff (e.g., lack of interaction), peer-relationships (e.g., isolation), learning in the home (e.g., distractions), motivation and engagement (e.g., poor self-discipline), communicating online (e.g., lack of nonverbal cues), and assessments (e.g., fairness of evaluations). The stressors identified were derived from research conducted before and after the COVID-19 pandemic; however, there was a considerable increase in publications following the global spread of the pandemic, with 84% of accepted papers (n = 57) published during this period. Among the stressors specific to courses

adapted for online delivery, those related to course delivery took precedence (e.g., adapted courses being insufficient replacements for practical classes, a lack of standardisation across subjects, poorer quality of remote learning due to instructors lacking the requisite skills for online teaching).

Overall, our findings suggest online students face various stressors that impact their learning experience, many of which are unique to the online experience of tertiary education delivery. These findings underscore the importance of considering the unique stressors experienced by online students when designing and delivering online courses and highlight the need to develop interventions and novel support services to mitigate these stressors.

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## SESSION ABSTRACT

### Allows us to make a real impact and contribute to society': Involving Students in Public Advocacy on Contemporary Issues.

**Cornelia Koch & Malena Mavrakis**

University of Adelaide

#### ABSTRACT

The advent of disruptive technologies, such as AI, necessitates a rethink of approaches to learning and teaching. As a result, traditional written research assignments may no longer be the best way to test student skills or prepare them for the workplace. Therefore, other ways to engage students and equip them with vital 21st century skills should be explored.

One option, trialled at Adelaide Law School in 2022/23, is involving students in public advocacy on contemporary issues: starting from November 2022 law students have run a public information campaign on the 2023 referendum on an Aboriginal and Torres Strait Islander Voice. This places students in a situated learning environment (Lave and Wenger, 1991) where they encounter authentic learning situations that immerse them in real life activities while using critical thinking skills (Oregon Technology in Education Council, 2007). The approach enhances knowledge transfer from an instructional situation to applications in environments outside the University classroom (Catalano, 2015).

Educating the public on the 2023 referendum is vital due to a lack of experience with referendums in Australia (with the last one held in 1999 and the last successful one in 1977). Amidst much uncertainty, members of the public seek reliable information. That creates an opportunity for universities to step in. Our project shows that students can play a role in informing the public about important contemporary issues. Four benefits seem apparent: (1) the student engages deeply with a subject matter that they are passionate about and (2) information is disseminated to the public, enabling them to make an informed decision when they vote. (3) Outreach activities also showcase the quality of our students and (4) raise the profile of the university as a provider of independent and reliable information in the community.

By engaging in collaborative advocacy on a contemporary issue, students become part of a community of practice (Lave and Wenger, 1991) that educates itself, develops strategies to disseminate information to the public and puts these strategies into practice. Working together on a joint goal allows different student collaborators to draw on their individual strengths and contribute meaningfully as information is disseminated to the public.

Our presentation provides student and staff perspectives on the experience of involving students in public advocacy on the referendum. In an elective course, a group of around 40 students trained together, picked outreach activities that drew on their personal strengths, and carried these out in groups or individually (e.g. information stalls at public events, oral presentations to community groups, resources for high school

teachers, a podcast series, social media outreach, all supported by a bespoke website). Assessment was project-based, with individual students or teams completing a project proposal early on and supplying a project report at the end. Each student also created a social media post aimed at informing the public.

The presentation will reflect on whether situated learning in the context of the referendum education campaign has led to deeper student engagement, what the challenges for educators and students were, and how they were addressed. Insights gained could be used for future projects in education which involve students in public advocacy on contemporary issues. We argue that this is an effective form of learning and teaching that engages students and equips them with vital 21st century skills.

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# The 7E Model of Enquiry-Based Learning.

**Thomas Wanner & Edward Palmer**

University of Adelaide

### ABSTRACT

Enquiry based learning (EBL) is widely used as a student-centred active learning pedagogy in higher education (Archer-Kuhn et al., 2020; Blessinger et al., 2014; Friedman et al 2010).

We present the findings of a research project which had the aim to evaluate the successes and failures of EBL, which was a compulsory University wide teaching and learning approach, in the Faculty of Arts at the University of Adelaide.

The study used face-to-face and blended courses at all levels from first year to postgraduate which had a very strong EBL focus in course and assessment design. Data was collected through surveys (48 responses of 168 staff: 27% response rate; 359 responses of 2478 students: 15% response rate) which was triangulated with 8 staff interviews and focus groups with 13 students.

Our study corroborates other research which has shown that active and self-directed learning leads to increased student engagement, learning and development of critical thinking skills (Archer-Kuhn et al. 2020; Madhuri et al., 2012; Wale & Bishaw, 2020). Students enjoyed EBL and felt it improved their learning outcomes. Staff also saw benefit but were concerned about training and support in using such the EBL paradigm. Both teachers and students highlighted many challenges with EBL, such as time commitment and fair assessment.

In our presentation, we will provide strategies on how to address some major challenges and introduce the 7E Model of EBL which is based on the teacher as the critical element for successful implementation in the online, face-to-face and blended learning environments. The 7E teaching framework can help with the design of more personalised learning and assessment which can accommodate the use of artificial intelligence by students.

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# Exploring the advantages of online learning through non-traditional student experiences. Withdrawn.

**Angela Hames**  
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### ABSTRACT

Belonging and fitting in are concepts shown to be linked to student well-being and ultimately persistence among commencing university students (Kift, 2009; Naylor, 2017). Students are more likely to persist with their studies if they feel they belong in their environment and can find a comfortable position within it. Unfortunately, many non-traditional students experience the opposite.

Negative feelings of not belonging can overshadow excitement soon after setting foot on the university campus. The participants in the author's doctorate research project self-identified as low SES, first-in-family students. Having had no prior knowledge or family experiences to rely on, they were unfamiliar with and unprepared for the physical environment and the student population that they would encounter. Upon arriving at university, they instantly compared themselves to others and judged themselves to be different in a variety of ways. They self-consciously became disorientated with who they were, what they perceived they looked like and how they perceived they were functioning. Their reactions had an immediate impact on their confidence and their desire to continue on and remain on campus.

This presentation reports on commencing students' initial perceptions and considers the possibility of ways in which introductory online learning environments (Tang et al., 2023; Yilmaz, 2019) may have the potential to better prepare non-traditional students for the university environment in safe, inclusive spaces, bypassing the 'culture shock' and disorientation effects of arriving at university with little or no understanding of what to expect.

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## SESSION ABSTRACT

**Bridging the gap: a largescale Health Science research course connecting undergraduate students, to researchers and future careers.**

**Nichola Thompson, Simranjit Sidhu, Agnes Arthur, Vasilios Panagopoulos, Kathy Gatford, Corinna Van Den Heuvel, Amanda Page**  
University of Adelaide

### ABSTRACT

This case study describes an educational framework developed for our large-scale capstone research placement course delivered to all final year Bachelor of Health and Medical Sciences (BHMS) students at The University of Adelaide. Our aim was to improve career readiness of our graduates through acquisition of research and transferable skills. Paramount to this was the successful use of schematics to signpost transferable and behavioural skills embedded in; assessments, workshop activities, a newly introduced careers/CV module, and the research environment helping students identify skills learnt through the course.

In the information era, there is a need to evolve from traditional large scale didactic teaching of content to enquiry led learning to optimise research skill development and support career readiness<sup>1,2</sup>. During the COVID period, undergraduate health sciences research education has faced challenges with increased online learning and assessment, reducing face to face time and impacting undergraduate's approach to learning and engagement<sup>3</sup>. Furthermore, there has been a loss of connection between the active university research community and undergraduate education. This created a gap between skills and experiences now provided and those sought by employers. The development of new BHMS program curriculum facilitated a unique window of opportunity to incorporate a novel course where students could immerse themselves in a research environment and learn key laboratory, analytical and communication skills. The objective was to better prepare our next class of graduates for their future research careers, through the development of transferable skills, and exposure to the University's research environment and also in their ability to identify and communicate their skills<sup>2</sup>.

The course is delivered using blended learning incorporating both online tools and face to face journal club and research placement sessions. The core knowledge pillar is delivered through online learning, placing emphasis on bringing professional practice to the learning environment, addressing scientific methods and practice, professional conduct, ethical practices, and effective science communication, all key graduate attributes for career development. Knowledge is then applied through the medium of research-led face to face learning. Research projects are undertaken by small groups of students and guided by an academic expert in their medical science field uniting the corner stones of university education, researchers and undergraduates. The course also provides the opportunity for students to network in an authentic conference experience, communicating their research to other students and researchers. The incorporation of a careers module and workshop on resume writing and job applications has provided our students with the opportunity to reflect on key skills learnt during the

year-long placement. Students can find inquiry-based learning challenging due to the deviation from their expected didactic rich learning environments<sup>1</sup>. This course successfully overcame this difficulty by emphasising the overarching purpose of developing transferable, career-ready research skills through assessment tasks. We will provide evidence of how evolving pedagogy led to an improvement in student course satisfaction, reflection on their course experience and understanding of benefits for future employability.

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### The Surprising Success of “Netflixing” Tertiary Study.

**Matthew James Gray**  
Tabor College

#### ABSTRACT

In Semester 1, 2023, I engaged in an experiment with my introductory Church History unit, *The Story of the Church*. I sought to overcome an identified decrease in student engagement in classroom-recorded video lectures across tertiary institutions. I proposed that students could still engage in the traditional 3-hour lecture content, if it was broken up into shorter episodic units. This was because students were already watching more than 3 hours of television streaming shows in one sitting on a regular basis, when binge-watching techniques were utilised. Consequently, I recorded my lectures utilising formatting that is culturally-resonant with binge-watching streaming TV shows. For example, I recorded all the lectures using higher-quality studio production, and collaborated with my institution's video producers to make it seem more entertaining.

We incorporated opening credits for every episode, including a brief soundtrack overlay. We called the video lectures “episodes”, and gave them “catchy” titles, “cliffhangers”, etc. I also utilised music, interesting trivia related to the topic, engaging visuals, and humour, so long as it further enhanced the learning rather than depreciated it. I also introduced a further 60-90 minute discussion tutorial for students to engage with the content in more detail, for the students’ “aftershow reactions”, a common term on television programs’ blog discussions, etc.

The results of this experiment were extremely promising, often in unexpected ways. Student viewing of the lectures greatly increased. Despite the tutorials representing a 50% increase in expected student attendance, most of the students sought to attend regularly and to engage vociferously in class discussions. Formal feedback from end-of-semester questionnaires was also overwhelmingly positive.

Furthermore, there were also unanticipated manifestations of heightened student engagement, especially among 20-25 year old students. Though unexpected, in retrospect these manifestations were entirely consistent with that demographic’s television viewing culture. In particular, those students began making “memes” and animated “gifs” about sections of the lectures and the content being discussed. This was done entirely without any prompting by me as the lecturer, but the results clearly showed the students’ autonomous desire to engage with the content in a manner suitable to their own generational context. In short, they treated my lectures the way they would treat a TV show they were enjoying together.

This experiment has raised many questions for further analysis. For example, what other techniques can be integrated into the future to further facilitate such engagement? Also, did the inherent narrative dynamic within a history unit lend itself to

this methodology in a way other units may not, or is this a methodology that is entirely replicatable? Such questions will also be explored in this Presentation.

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# TEAM- Telepractice Education and Interprofessional Module.

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### ABSTRACT

#### Background:

Telepractice and simulation combined is becoming an innovative model of clinical education in speech pathology with positive growing evidence in the literature. One study showed increase to student confidence across all domains of communication, assessment, and management (Howells et al. 2019)

Interprofessional education using simulation engenders enhanced understanding of the knowledge of Speech Pathology students' own roles and those of other disciplines and enhanced confidence with their own level of knowledge which leads them more confidently to future clinical placements. (Mills et al, 2019). Telepractice is a skill that needs to be explicitly taught to our students and there is a need to include a pedagogical framework that supports learning and teaching of allied health to deliver telepractice services (Overby and Baft-Neff, 2016) including the use of synchronous and asynchronous communication via tele-methods.

There is much less evidence combining all three approaches in teaching and learning as well as for authentic assessment.

#### Aim:

The aim of this project was to explore the effectiveness of a telepractice, interprofessional clinical simulation module of team community assessment and intervention for an adult with a progressive neurological condition with specific goals of evaluating students' perceived competence and confidence in domains of telepractice, interprofessional working, clinical and communication skills.

#### Methods:

25 students (across 4 allied health disciplines) participated in two TEAMs. A mixed-method research design will be used to analyse student perceptions of confidence and competence in the four domains of telepractice, interprofessional working, clinical and communication skills. Early data analysis has shown increases in both student's confidence and perceived knowledge and skills in the four domains.

**Conclusion:** The TEAM module is anticipated to be a viable means of teaching and learning and for authentic assessment of telepractice, clinical, professional and interprofessional skills and knowledge (and attributes) for allied health, pharmacy and exercise physiology students and has the potential to be expanded into other disciplines such as psychology and nursing.

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# How hard can it be? Testing the reliability of AI detection tools.

**Daniel Lee**

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### ABSTRACT

The introduction of ChatGPT in November, 2022 has brought a new level of Artificial Intelligence (AI) to the public attention and accessibility. As a result, it has been adopted in academia by students, some of whom have been found to submit works generated by AI (Svrluga & Natanson, 2023; Waugh, 2023). Universities have been employing TurnItIn as a plagiarism checker and this service has recently added an AI detection mode. However, as this is fairly new, it is worth double-checking any suspicious submissions with a third-party AI detection tool.

This presentation details a research project testing five free online AI detection tools and their ability to assess AI content in two simulated academic assignments. ChatGPT was used as the AI source and was instructed to write a movie critique and a short essay then to improve human generated texts. These samples were modified (Anderson et al., 2023) to give various degrees of tests. The results of the tests indicate a diverse range of reliability of the online tools.

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## Rebellious reimagining of a fully online discrete Aboriginal and Torres Strait Islander health course.

Aidan Cornelius-Bell, Brittany Marsh, Michael Watkins

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### ABSTRACT

In this presentation, we will discuss the process we undertook to craft the “UO First Peoples’ Health” course from the ground up, including examination of our constrained positionality as curriculum designers juxtaposed against systemic colonialism.

By drawing on a variety of frameworks and tools (i.e., the Aboriginal and Torres Strait Islander Health Curriculum Framework [Australian Government Department of Health and Aged Care, 2020], and Cultural Capability Model [West et al., 2017]) and creating and tailoring resources which privilege Aboriginal voices, our team of Aboriginal and non-Aboriginal course writers have crafted curricular which supports students to begin their cultural learning journey. In doing so, we have also created new spaces for “more” as we navigate first year students’ engagement towards enabling self-determination and empowerment of Aboriginal peoples (Behrendt, 2019; Sherwood, 2013).

Having run this course twice under a new model which emphasises strengths-based approaches (Bryant et al., 2021), plural voices (Andreotti et al., 2011), and cultural capability (away from dated concepts of cultural competence) (West et al., 2021), we share our early evaluation of outcomes, insights and implications. We will also elaborate on strategies that other courses may use for the assessment of cultural capability, tracing students’ learning journeys, and developing robust anti-racist curricular. Our early research findings add further weight to the impact of the inclusion of strengths-based Aboriginal health curricular and its delivery in the online environment.

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# Facilitating engaging and transformative student experiences.

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## ABSTRACT

This presentation is about an innovative approach in teaching and authentic learning that uses modern technologies, and the educational theories that supported its design. Facilitating transformative learning is regarded as 'a praiseworthy goal among educators who want to make a significant impact on the lives of their students' (Heddy & Pugh, 2015, p.52). Transformative learning is defined as 'the process of effecting change in a frame of reference' (Mezirow 1997, p.5), and for students, experiencing transformative learning can represent 'a fundamental shift' in their 'worldviews and/or identity' (Heddy & Pugh, 2015, p.52). This presentation introduces the 'WIPS' design toolkit for educators who are seeking to achieve transformative learning outcomes in their courses. WIPS stands for 'Whereabouts', 'Inspiration', 'Precepts' and 'Stages', and the toolkit considers how participants can be taken out of their comfort zones to find inspiration, and ultimately experience transformative learning (eg: Mezirow 1978).

The design of WIPS is based on the author's experience of working on, and researching, numerous transformative initiatives, including cross-community arts activities in Northern Ireland, Indigenous and multicultural programs in Australia, and the Burning Man event in the USA. Originally devised for changemaking community organisations, government agencies and corporations, WIPS has now been adapted for use by educators, and was tested and refined over a two-year period by the author within a unit of a Masters of Management course at a European university, in which it was used to develop an innovative online learning and assessment exercise designed to catalyse and support students in experiencing transformative learning, whilst developing their management knowledge, skills, networks, and confidence. This challenging exercise required students to, within a short period of time, cocreate a 1-hour long, online, prosumption oriented event, with limited instruction, and with people they had only recently met, who were in different geographic locations, using new technologies. The students were not graded on the events they created, but rather on a reflective journal submission about their experiences of the exercise. A thematic analysis of the student's reflective journal submissions and course evaluations demonstrated that the exercise was successful in fostering transformative learning, and hence, validated WIPS as a useful educational tool. Furthermore, the research revealed the usefulness of WIPS in making courses more engaging for students.

Using the theory of change (eg: Connell and Kubisch, 1998) as a framework to demonstrate how WIPS catalyses and supports transformative learning, this presentation breaks down; the WIPS toolkit, explaining its key features and origins; the case study of the innovative exercise that was used to test the toolkit; the author's experience of using WIPS, and suggestions about

how educators can use WIPS to catalyse and support the transformative learning outcomes of their students. The findings of the research advances knowledge about designing transformative educational experiences and proposes a practical design toolkit that members of the teaching community will find valuable.

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## Automating the “Art” of Psychological Measurement.

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### ABSTRACT

Self-report instruments (e.g., scales, surveys, and questionnaires) are a significant tool in psychological research to measure latent constructs such as personality traits, emotions, and attitudes. Developing valid self-report measures requires generating numerous high-quality items, an arduous process requiring substantial time, effort, and creativity (Boateng et al., 2018; Carpenter, 2018; Kyriazos & Stalikas, 2018).

In this study, we present an AI-based solution to automate this process using large language models (LLMs). Specifically, we propose Psychometric Item Generator (PIG) as an alternative approach that leverages the power of novel LLMs, such as Google’s Bard and Anthropic’s Claude (Götz, Maertens, Loomba, & van der Linden, 2023). After interacting with the LLM via a series of well-crafted prompts presented in a conversation-like fashion, the PIG method can rapidly generate an item pool with many high-quality items measuring the target latent construct.

Across two demonstrations, we illustrate the PIG’s utility. First, via Bard, from a few-sentence prompts and relying on the LLM’s hallucinations, it produces over 20 usable items assessing “propensity to trust in AI.” Second, via Claude, 20 items akin to those recently proposed to measure AI anxiety (Wang & Wang, 2022) are generated.

The PIG approach requires no technical expertise and is free to use. It overcomes prior barriers to automatic item generation like inflexibility, inaccessibility, and computational demands. Also, the PIG approach allows researchers to break free from reliance on manual item writing and finally let algorithms speak the language of psychometrics. Overall, our study aims to provide researchers with a cost-effective, versatile artificial intelligence solution for psychological measurement.

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# A Self-assessment Framework for Embedding Aboriginal Content in the Curriculum.

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## ABSTRACT

There is an onus on the colonial business higher education sphere to support and understand the pursuit of Aboriginal business growth and success as their economies rebuild in the aftermath of colonialism. With growth in both the number of people identifying as Aboriginal and businesses operating in the Indigenous sector, higher education also needs to equip graduates with skills and knowledges to work with and for Aboriginal Peoples as essential job-ready cultural competency.

In line with this, the UniSA Aboriginal Enterprise Plan (2021-2025) and Stretch Reconciliation Action Plan (2018-2021) seek to raise the cultural 'competency' of the University. One identified path to achieving these principles is embedding Aboriginal content in the teaching curriculum.

However, with only a handful of Aboriginal academics in the higher education business disciplines, and the institutional enacting of 'nothing about us without us' (Charlton, 1998), there is more demand for creation and embedment of Aboriginal content in curriculums than there is capacity to deliver. In response to this shortfall, an Aboriginal academic has led the development and trial of a pragmatic self-assessment framework to support non-Aboriginal educators to independently develop and embed Aboriginal content in their teaching. This provides a path for University Aboriginal reconciliation strategies to flow through to teaching content and delivery, creating a groundswell cultural shift (Burgess et al, 2022).

The collaborative and purposive embedding of Aboriginal content into business teaching by Skye (indigenous) and Anne (non-indigenous) started in 2016. Their partnership demonstrates that non-Western and Western knowledges, although functioning independently, can benefit from creative interconnectivity (Chambers & Buzinde, 2015). The framework's development and community validation have come through Skye's cultural leadership in the Aboriginal business context. Anne is responsible for the course which formed the reflective base and pilot for the framework's development.

This presentation details the steps we have taken to formalise and trial the embedment of Aboriginal perspectives in the business course curriculums at our institution. This research adds to the evidence that Indigenous people mentoring non-Indigenous educators to develop culturally responsive pedagogies is a positive and successful path (Burgess et al, 2022).

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# Evaluation of a professionalism skills development task in a Doctor of Medicine program.

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## ABSTRACT

### Background

Professionalism is a key component of medical education with correlations to quality of care, health outcomes and career satisfaction<sup>1</sup>. Professionalism skills include ethical behaviour, communication, accountability and collaboration<sup>2</sup>. Self-reflection and feedback literacy are professionalism skills critical for positive professional relationships, continuous learning and high standards of patient care<sup>3</sup>. Evaluation of professionalism skills and feedback literacy remain significant challenges in health professions education despite decades of study<sup>4,5</sup>. Research indicates that peers are better positioned than academics to observe students' professional behaviours, and can provide feedback in multiple domains that is both valid and valuable<sup>2</sup>.

### Aims

Evaluate a self- and peer assessment task designed to promote the development and evaluation of professionalism skills for post-graduate medical students.

### Methods

A structured self- and peer-evaluation task was designed and integrated into a 12-week team cadaveric dissection program for 2nd year students in 2022:

Students were provided with clear learning outcomes, a short seminar presentation and resources regarding the characteristics of high-quality effective feedback

Students completed an online survey (Questionnaire 1), providing self- and peer-evaluation regarding team contributions (qualitative) and rating task-preparedness (quantitative)

Academic staff graded the quality of feedback using a simple rubric

Feedback and grades were provided to students

Students completed Questionnaire 2, reflecting on the task including insights gained and alignment between self- versus peer-evaluation (qualitative).

Quantitative data was analysed using paired t-test in PRISM and is presented as mean  $\pm$  SEM. Qualitative data was analysed using reflective thematic analysis.

### Results

Questionnaire 1 was completed by 170 students in  $37.2 \pm 3.2$  min and Questionnaire 2 was completed by 159 students in  $11.3 \pm 0.9$  min. Peer-rating ( $9.4 \pm 1.0$ ), exceeded self-rating ( $8.4 \pm 0.1$ ,  $p < 0.0001$ ), regarding preparedness for dissection tasks. Themes identified in qualitative analysis include respect, empathy, integrity, communication, teamwork and confidence. Most students (73%) provided quality feedback and 93% reported the feedback they received was useful.

### Conclusion

Team-oriented tasks such as cadaveric dissection contribute to students' professional identity formation and provide opportunities for development and evaluation of multiple professionalism skills. Our findings support previous studies showing peer-evaluation provides valuable feedback regarding team-engagement, work habits and interpersonal skills<sup>2</sup>. Explicit teaching can improve feedback literacy, clarify links to professional practice and enhance task-engagement. Self- and peer-evaluation integrated into existing curricula can enrich learning experiences and promote self-regulated learning. Specific training in feedback literacy can strengthen curricula and enhance graduates' preparedness for practice.

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# Development, implementation, and evaluation of an interactive oral assessment.

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## ABSTRACT

Interactive oral assessments (IOA) are a form of oral assessment in which students are asked a series of open-ended questions based on a defined set of learning objectives. This allows for a fluid discussion between student and assessor, enabling the assessor to determine the student's application of critical thinking and the breadth of their understanding of course content.

IOA allow active learning with access to real time feedback to discuss students' strengths and weaknesses (1). Students are empowered to create personalised learning responses, maintaining academic integrity and training for their future career (2).

In 2020, the global COVID-19 pandemic changed the implementation of assessment in higher education. Universities implemented mostly non-proctored online exam, which contributed to academic misconduct concerns (3). This concern has been further exacerbated by the recent release of generative artificial intelligence tool such as ChatGPT (4).

This research was conducted to address these challenges and sought to explore the viability of the IOA as an authentic assessment in a second-year genetics course with approximately 75 students enrolled at the University of South Australia (UniSA). The aim of this research was to determine whether IOA was an effective high stakes assessment (40% of final course grade) and a means of assessing student learning while encouraging higher levels of student satisfaction and academic integrity.

Data on student satisfaction was collected through a pre- and post-IOA online survey as well as the university's MyCourseExperience survey. Data on student performance included comparisons of performance on the IOA with exam results from previous cohorts. Student performance on the IOA was screened for assessor bias. Furthermore, a comparison between domestic and international students was performed.

The results indicated that IOA were effective in assessing student knowledge and understanding of course material. The findings indicated that the IOA projected a higher level of satisfaction, especially with its relevance to authenticity and real-world application. Moreover, the findings indicated that students from English as their second language were not significantly disadvantaged by the IOA. Academic misconduct was almost non-existent in the IOA due to the need for the student to be physically present and directly interact with the assessor.

The outcomes of this project highlight the value of using IOA as an alternative assessment form particularly in the post-

COVID-19 landscape. By offering students an authentic, real-world assessment type, oral assessments provide a meaningful and engaging approach to evaluating student learning. As universities look to improve academic integrity as well as increase student satisfaction, the implementation of IOA as assessment items should be considered.

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# Strengths and Challenges of Neurodivergent University Students.

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## ABSTRACT

While society is becoming more aware of the value and implicit benefits of neurodiversity, the tertiary education sector is not yet well-equipped to support neurodivergent students. Poor educational outcomes and wellbeing are evident among affected populations including autistic students, students with attention deficit hyperactivity disorder (ADHD) and students with other learning differences such as dyslexia [1-3]. To better understand the strengths and challenges among the broader neurodivergent student community, data were collected via an online questionnaire. Student respondents (18+ years old) were eligible if they self-identified as neurodivergent or if they had received a relevant clinical diagnosis, and had studied at an Australian university within the last five years.

Study participants (N = 241) comprised 82% with relevant diagnoses, and 18% who self-identified as neurodivergent without a diagnosis. Their data show that neurodivergent students participate in university study across a broad range of disciplines. The majority of reported diagnoses were ADHD (75.6%) and autism (47.2%), followed by auditory processing disorder (11.2%), dyslexia (8.6%), sensory processing disorder (8.2%) and dyscalculia (5.6%); a substantial proportion of participants reporting co-occurring neurodivergent presentations (e.g. 28.4% autistic/ADHD; 8.1% ADHD/auditory processing disorder). Study data demonstrate extant knowledge of poor mental wellbeing among neurodivergent populations, as participants reported self-reported rates of anxiety and depression of 90.4% and 75.6%, respectively.

While it is clear that all students have unique strengths and challenges, irrespective of their diagnosis (or lack thereof), neurodivergent students frequently reported challenges associated with three core domains: executive function (e.g., organisation, time management, stress management), social communication (e.g., asking for help, responding positively to constructive criticism) and sensory processing (e.g., fluorescent lighting). In contrast, creativity, problem solving skills, critical thinking skills and ability to recall facts, ideas and concepts were commonly perceived learning strengths. Positive educational experiences were associated with the availability of specific support programs, and when staff had a high level of literacy related to neurodiversity. Negative educational experiences were associated with being misunderstood, discriminated against, and obstacles or barriers related to seeking support.

In this presentation, we will discuss how data from this study can be used to inform new strategies to narrow disparities and broaden positive experiences of neurodivergent university

students. Our ongoing work aims to build integrated and innovative models that address structural, workforce and student ways to implement neuro-affirming approaches in higher education.

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## How might academic development practices support tertiary educators' well-being?

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### ABSTRACT

Concern for the well-being of students and teachers has been growing steadily over the past two decades. While much of the discourse has centred around students and, to a lesser extent, school teachers, some research on tertiary educators has also appeared. Berry and Cassidy (2013), for example, identified structural factors that are commonly reported in the scholarship to have a negative impact on university lecturers' well-being. These include loss of autonomy, increased pressure and workload due to growing numbers of students and expectations from management, as well as anxiety about the future and job security, mainly due to frequent changes to administrative and academic structures.

As a result, initiatives have been put in place in many tertiary education institutions, to understand the factors that affect educators' well-being, and to try and alleviate stress, anxiety, and burnout caused by the demands of modern academia (e.g., Savage & Morrissey, 2021; Gunson et al., 2016). Many such initiatives, however, take the form of services offered 'alongside' educators' day-to-day work practices, for example in the form of professional counselling or meditation and relaxation classes that individual staff may elect to take.

In this presentation, we explore instead how educators' workplace well-being may be supported "from within", by attempting to mitigate some of the existing systemic and contextual pressures, rather than simply helping educators cope with them. As an example of an academic development practice that may achieve this purpose, we discuss the one-on-one online consultations that the Teaching Innovation Unit at UniSA has been offering over the past two years.

For the purpose of evaluating this and other similar initiatives, we propose a mapping of elements from Ryff and Keyes' (1995) well-being scale and Wheatley's (2022) Workplace well-being framework, and align these elements with actions and behaviours through which our work is typically manifested. We employed this framework in our analysis of consult evaluation data, and we share the preliminary results of our analysis, which indicate that the online consultations have been a valued resource for UniSA educators. Finally, we suggest avenues for future research investigating the impact of academic development practices on tertiary educators' well-being more broadly.

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# Explicit or Implicit Research Skill Development in University.

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## ABSTRACT

A Bachelor of Media graduate, who experienced Explicit Research skill Development (RSD) and assessment in the degree said that rather than being explicit, this development "...would have to be hidden under a veil of something much cooler" (Wilmore & Willison, 2016, p 123). Ever since, I've been wondering when should learning intentions around research skills be made explicit, and when should they be kept, if not hidden, then implicit.

Tracking back to when we first published the RSD framework (Willison & O'Regan, 2007), then studied its use in 29 semester-length courses across five institutions (Willison, 2012); the study demonstrated statistically significant improvements of student self-assessment of their discipline-specific skills, matching academics' perceptions based on assessment tasks. Year-later interviews amplified and enriched the strong sense of learning gains and functionality of research skills. However, across all the courses, no significant changes in student attitudes were evident.

The next major study using the RSD found: Bachelor of Oral Health graduates to be affectively engaged in using their research skill in dental clinics (Willison, et al, 2020); Animal Science honours students evidenced metacognition when discussing their learning and their projects (Willison, et al, 2023); Medical Science honours students were more ready for PhD research (Willison & Buisman-Pijlman, 2016); and Media graduates were using research skills in industry, but not all were convinced about the explicit development of research skills (Wilmore & Willison, 2016), such as the student quoted above.

When I took over a course in the Bachelor of Teaching called Research as Teaching Practice in 2021, this was a great opportunity to address this question in the context of Preservice Teachers: when should research skill development made explicit, and when should this development be more implicit or hidden under a veil? I used an Action Research methodology, including data generated from a Pre-and post- questionnaire of student self-assessed research skills and attitudes in the context of teaching and learning in schools. This data was augmented by observational data and university-mandated Student Experience Questionnaires.

This presentation will focus on the 2021 and 2022 cycles of action research. 2022 running of the course, based on improvements from 2021, saw a statistically significant and large increases in effect sizes for student cognitive skills, but large decreases in attitudinal measures!

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# Effectiveness of online assessments through the lens of students.

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### ABSTRACT

Online learning has been designed to allow learners the flexibility to engage with learning materials removing a barrier to learning (Tobin 2020). However, challenges in online assessments imply a need to change the method of its implementation in terms of identity, security, and academic integrity in assessments, and online discussion forums (Rovai 2000). At UniSA Online (UO) students complete a wide variety of assessments using many online tools. This project focused on the student learning and usability of the online assessment tools (i.e., exams and quizzes) in complete asynchronous learning. By understanding the issues of usability and learnability and how they affect different student cohorts, UO will be able to better direct specific support to students to enhance learning experiences (Kiget et al. 2014).

This project employed a sequential explanatory mixed-methods design, with an initial quantitative questionnaire survey to identify key issues faced by students followed by qualitative focus groups exploring identified issues.

Among the 275 response attempts received for the student survey, 152 were considered valid (fully completed), and 44 indicated neither online quizzes nor exams in their courses (and were therefore excluded from the rest of the survey). 6 were started but ended after answering only two demographic questions, and 73 were initiated via the survey link but had no information entered by participants.

A System Usability Scale (SUS) questionnaire, which is a tool used to assess the usability of software systems, was used as the primary evaluation tool to identify the usability of the online quizzes and exams. Overall, 127 and 93 students completed the SUS questions for online quizzes and exam platforms, respectively. Exam SUS score of 49.9 (n=93) and Quiz SUS score of 29 (n=127) were both in the 'F' grade range meaning that from a usability perspective, the platform used for online exams and quizzes was 'not usable' or 'not acceptable'. Interestingly, the overall study outcome based on students' perception of the effectiveness and usability of online assessment tools found that they favoured online quizzes (58.3 %, n=74) as a more effective and appropriate choice of assessment compared with online exams (26.3%, n=25) in their survey responses. The focus group discussion showed a positive student attitude toward online quizzes compared with online exams. Students' preference for online quizzes was attributed to the flexibility of time, the ability to complete quizzes at different locations, and system features. Similarly, the system features of online exams were notably appreciated by students given online exams are remotely invigilated with no need for students to travel to a centralised location.

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# Grouping students based on learning styles and its impact on students' academic performance in group assessments.

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## ABSTRACT

There are several factors that impede the smooth functioning of student groups while working on group assessments. These include interpersonal disagreements, group composition issues, unequal workload distribution, and social loafing (Hirshfield & Koretsky 2018; Trroussas et al 2023). To address challenges related to group composition, Pardes and Rodriguez (2006) suggest grouping students according to their learning styles (homogenous groups) may provide synergy and provide opportunities to improve learning outcomes. Conversely, Grigoriadou et al. (2006) argue that heterogenous groups with dissimilar or mixed learning styles have the advantage of generating dynamic group interactivity and ideas from different perspectives. Hence, our study aimed to investigate whether grouping students based on similar (homogenous) and dissimilar (heterogenous) learning styles had a positive impact on students' academic performance.

The study involved students completing a Felder-Soloman Index of Learning Style Survey (ILS) in the first week of the first-year unit - Organisational Behaviour. We assigned students who had one single dominant learning style into similar (single) learning style groups (8 groups). Students who had similar scores on two different learning styles were grouped under two styles category (3 groups). We combined the students of different learning styles to create mixed learning styles' groups (11 groups). Finally, the students who did not complete the survey were placed under 'Random Groups' (6 groups).

Students participating in the study completed two types of assessments in their groups. As a formative assessment, there were 8 weekly group concept games (non-graded) spread across the duration of the topic. A group case report constituted the summative part of the assessment that required students to work in groups. The analysis results showed that the mixed learning styles groups performed better in the group assessments than those in the single or two-style groups. Eight out of 11 mixed learning style groups were on the top 15 in the leaderboard table for the formative assessment (weekly group concept games), and six out of 10 groups that obtained distinction in the group case report formative assessment belonged to the mixed learning style groups category.

Although learning styles are considered a stubborn myth, our results suggest that forming groups based on mixed learning styles may provide opportunities to enhance learning outcomes for students in group assessments in university courses.

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## Consensus Marking: Building an Educational Alliance and Fostering Evaluative Judgement.

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### ABSTRACT

#### Introduction

Consensus marking is a new assessment model for evaluating the clinical performance of students. The findings of two research studies (retrospective and prospective) that evaluated the use of consensus marking in an online clinical viva for nurses enrolled in a post-graduate (PG) emergency nursing course will be presented (Henderson et al. 2021; 2022)

#### Background

Fostering evaluative judgement facilitates a student's journey to independence so they can make decisions about the quality of their clinical performance and become less reliant on the judgement of others (Boud et al. 2018; Boud & Molloy 2013; Ilangakoon et al. 2022; Tai et al. 2018). Our study used consensus marking as a method to engage students in self-evaluation and grade negotiation through calibration and a feedback dialogue with the educator.

#### Method

A retrospective and prospective study was undertaken to evaluate postgraduate nursing students' perceptions of consensus marking used for evaluating their clinical performance during an online clinical viva, a capstone assessment for the degree. The first study was a qualitative study using retrospective student interviews about their perceptions of consensus marking. The second study was a convergent mixed-methods parallel research design comparing consensus marking with conventional methods of assessment

#### Discussion

Students perceived that consensus marking was less hierarchical and similar to a collegial debrief. They noted a shift in the power dynamic between student and educator enhancing their accountability for learning and facilitating reflection and self-evaluation, capabilities that underpin the development of evaluative judgment.

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## Statistics Anxiety – the devil we ought know!

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### ABSTRACT

Statistical literacy is crucial to our modern society, the proper understanding of techniques and how to apply them to conclude scientific-based decisions. The learning of statistics is not often exposed to students until they reach university. Also, the students who commonly face statistics are the ones with fear of mathematics, and thought they left it behind at the end of school (Chiesi & Primi, 2010; Sloommaeckers et al., 2014). Imagine how they feel when they meet the next devil in the career path that they have chosen? The learning of statistics is inhibited by fear, anxiety towards it (Aksentijevic, A, 2015), and regarded as related to but distinct from mathematics anxiety. The literature is vast and there are extensive theories on mathematical anxiety (Bessant, 1995) from where it stems from in school education to higher education setting.

Let's narrow down on the devil we ought know and consider a cohort of students who enter university from school and take a program of study where their perception was that equations, maths and symbols were left behind. Similarly, Ruggeri et al. (2008) reported this observation for psychology students and in turn my own teaching experiences agreed with this in statistics courses in health and business. This case study in a business cohort examines how statistics anxiety is related to dimensions introduced by Auzmendi (1992) of their students' attitudes such as confidence, security and motivation towards studying statistics. Also, does the individual devil of personalisation, their name and acknowledgment reduce their statistics anxiety? The cohorts consist of a first-year business course that has approximately 300 students, which illustrates two characteristic challenges: a service course across business related degrees and a dimension of scalability.

To address the personalised devil, the study harnesses the use of technology (OnTask, Pardo 2016) to reach out to students providing some personalised feedback and updates on the course in an attempt to build security and confidence. The main question that is addressed is how these dimensions change following introductory statistics instruction and the introduction of technology based personalised feedback, and moreover does statistical anxiety reduce? A similar study that measured only the attitudes was conducted by Korolkiewicz, M, Fewster-Young, N et al (2022). Both studies find that anxiety is negatively related to security-confidence and positively related to motivation, and that the structure of these relationships has significant change with before and after statistics instruction. Furthermore, the results suggest further practical implications where efforts to improve students' attitudes and experience with statistics might need to be directed, such as increasing personalised feedback and learning which affects their confidence, value and control and the study concludes with a discussion of the implications of these results for statistics instruction.

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# Ready, Set, Go! Igniting and Supporting Career Preparation through the curriculum.

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## ABSTRACT

Many university students begin their studies with limited understanding or worry about what career options they will have at the completion of their degree. The initial phase of adapting to the intricacies of tertiary education can be all-consuming, spanning the initial weeks, the first semester, and even the entirety of the first year.

Many degree programs now incorporate a specialized focus on professional skills (Lavi, Tal and Dori, 2021), particularly within the first year. This crucial initiative serves a dual purpose: facilitating a seamless transition to university life and fostering the cultivation of essential transferable skills that will pave the way for academic success, personal growth, and significantly improving students career aspirations (Beier et al, 2019). In some discipline areas, science in particular, career preparation and employability skills are often overlooked.

In response to this need, we have recently introduced a degree-spanning curriculum thread, that seamlessly integrates employability skills throughout the entire duration of our 3 and 4-year undergraduate Bachelor's degrees in Science. The approach not only prepares students for the challenges of higher education but also empowers them to proactively shape their future employability from day one and build throughout their degree a competitive employability portfolio tailored to their career aspirations and employer needs (Rios, 2020).

Our holistic strategy unfolds in three progressive stages:

### Year 1: Cultivating Foundations

In their inaugural year, students embark on a journey to understand and harness employability skills. They begin crafting their resumes and are introduced to foundational professional competencies, setting the stage for their transformative educational expedition.

### Year 2: Refining Skills

As students progress to their second year, the focus shifts to refining their employability skills. A special emphasis is dedicated to effective communication and professionalism, with scaffolded experiences of communicating with industry partners.

### Year 3: Real-world Application

The culminating year presents an opportunity for students to apply their skills within a simulated work environment or through an industry placement. This immersive experience bridges the gap between theoretical knowledge and practical application, fostering a level of preparedness that is unparalleled.

Preliminary assessments of our curriculum design have yielded

promising outcomes, revealing a substantial increase in the preparedness of third-year students for the demands of the workforce.

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# Embedding reflexivity in teaching and learning: A community of practice approach.

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## ABSTRACT

In recent years, the SARS-CoV-2 pandemic and the increasing accessibility of artificial intelligence (AI) have profoundly shaped higher education globally and in Australia. The rapid pivot to online learning during the pandemic challenged educators to reconfigure teaching practices and to reconsider how student-centered learning happens in virtual, long distance, and hybrid classrooms. In 2023, educators are now challenged by AI's presence in their topics, bringing both benefits and risks to student learning. University educators are moving quickly to provide AI literacy, demonstrate transparency, and engage new technologies.

As the future is now, opportunities emerge for educators (across all modes of teaching) to understand and utilise authentic, reflexive learning and teaching practices that support critical and transformational learning<sup>1</sup> making connections to lived experiences of students and others in their world.<sup>2</sup>

Deep learning begins with educators who learn how to self-reflect in their teaching practices to produce insight for future action. Critical reflexivity extends this awareness to examine “values, beliefs and assumptions that may be unconsciously embedded within a personal worldview” leading to action and positive change in personal and sociocultural and political contexts.<sup>3</sup>(p229) As such, reflexivity is foundational for transformative learning and teaching in rapidly changing contexts.

Reflexivity is a continuous systematic, and social process. It is mediated by interactions between theory, experience, community, and practice-based learning.<sup>4</sup> Supported by an Educational Capacity Grant, we are developing a Reflexivity in Teaching and learning Community of Practice(CoP). We recognise that reflexivity is not intuitive and must be taught and modeled—academics learn best from each other.<sup>5</sup> Reflexive capability is a prerequisite for educators to innovate in their practice, developing creative and authentic strategies to enhance student learning.

We will examine the processes and key outcomes of our Community of Practice through a pre-post evaluation. Our study will contribute to theory development in reflexive learning and teaching. Narrative analysis will be applied to understand indicators that support positive teaching identities, as well as barriers and enablers of reflexive teaching practices. Insights from the pilot will be fed back into the ongoing CoP for a larger study. This paper will provide the theoretical foundations for our pilot study, including the research protocol, and reflections on our process to date.

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# Experiences of medical students in a novel participatory music elective.

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### ABSTRACT

Music has been offered in medical education across the world, yielding reported outcomes of enhanced wellbeing, fostering of medical humanism, and development of professional identity. However, the existing literature on music programs within curricular medical education, especially those involving participatory or performance components, remains limited. To address this gap, our study seeks to explore the experiences of medical students in a novel participatory music elective and the potential impacts on their personal and professional development.

Students were invited to share their reflections on participating in the elective, by granting access to a personal essay submitted for assessment (2018-2020 cohorts) or by taking part in an online survey. Eleven personal reflection essays were accessed while the online survey garnered responses from 19 medical students. Written responses were analysed according to the method of Interpretative Phenomenological Analysis (IPA), which involved an iterative process of data analysis to elicit meaning of participants' experiences and to draw out key themes.

Our preliminary data reveal that most participants found the elective to have a positive effect on their mental health, emotions, communication skills, and teamwork and was an opportunity to gain new skills. Analysis of the student reflections and survey written responses yielded a few emerging themes: identity, enriched learning experience, wellbeing, social connectedness, medical humanism, and a deepened understanding of the role of music in medicine. Some of the reported challenges faced by students participating in the elective included team integration and collaboration, scheduling of rehearsal and performances, dealing with perfectionism, performance anxiety, increased workload, and inability to connect with patients.

Despite being a work in progress and challenges associated with the COVID-19 pandemic, we are already witnessing the potential of our study to contribute to the growing body of evidence supporting the positive impact of music in medical education (1-5). Beyond its role in supporting the wellbeing and acquisition of new clinical and musical skills in medical students, it seems that music engagement also acts as a reminder of the role that music has played in formative moments of their lives. From this juncture of awareness, the act of music performance facilitates a profound and mutual vulnerable connectedness between the medical student and patient. This, in turn, reshapes the role of music in medicine and enables emerging doctors to uphold a more holistic and humanistic perspective of patient care.

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### A WIL-ing heart; When the original yellow Wiggle joins online classes for authentic work- integrated learning.

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#### ABSTRACT

Developing courses that are industry-informed means embedding authentic and real learning activities and assessments. Specifically, foundational to the creative industries degrees at UniSA Online (UO) are strong relationships with representatives from sectors requiring communication and digital media strategies and graduates. Graduate outcomes in terms of employability, relevant skills, and applicable knowledge are strengthened when academics and industry co-create learning opportunities for students.

This paper discusses how connections made through community networks can produce strong learning outcomes for UO students. Using examples of curriculum co-created with various industry partners, this presentation will then highlight one industry engagement strategy with a high-profile celebrity. Greg Page, the OG Yellow Wiggle and his not-for-profit, Heart of the Nation, has partnered with UniSA Online to co-create learning activities and assessments around a topical communication problem. That is, raising awareness and understanding of the chain of survival for out of hospital sudden cardiac arrests (Paratz et al., 2023).

Scaffolding work-integrated learning (WIL) across all years of an undergraduate degree (Dean et al., 2020) underpins these UniSA Online industry partnerships. WIL is an educational approach that requires students to engage in authentic and meaningful work-related tasks, and must involve three stakeholders; the student, the university, and the workplace or community (Zegwaard et al., 2020).

Through a dialogic communication lens (Kent & Taylor, 2002) this paper also reports on the findings of academic research that focusses on the complex contexts, risks, and efforts to build and nurture trusted and valued partnerships (Burley 2018). Key literature concerning relationships and academics in WIL falls into three related themes; employer engagement (Zegwaard et al., 2019), the vital role of university boundary spanners, and their unique knowledge, skills, and contexts (Winchester-Seeto et al., 2016). The paper will identify the steps taken to embed WIL in online curricula and raise some of the challenges to this occurring in both online and face-to-face deliveries.

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### Fusing Authentic Learning & Interprofessional Education through the use of health care HUDDLE's.

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#### ABSTRACT

Human bioscience curriculum represents the foundation for a range of allied health disciplines. Challenges for learning designers include the delivery of effective and sustainable learning, navigating large glossaries of terminology, and remaining relevant to each of the unique disciplinary memberships of the classroom. Traditional pedagogical approaches have been linked to student memorisation and rote learning, meaning higher order learning milestones remain unrealised, and learning gains are often a short term phenomenon. Our work sought to continue to build on a successful local human bioscience program, which had already witnessed a shift from basic memorisation and recall tasks through a flipped classroom design which was sympathetic to the different disciplinary membership.

We present our latest iterative interprofessional learning developments within a human bioscience course. We introduce the use of an authentic healthcare workplace team HUDDLE, an acronym for 'Healthcare Using Deliberate Discussions Linking Events'<sup>1</sup>. These established workplace practices are characterised by interdisciplinary collaboration and shared problem solving to optimise patient care and safety<sup>2</sup>.

We introduced the HUDDLE to the classroom as an interprofessional education (IPE) tool to support weekly group work activities and assessments. Classroom HUDDLE tasks are framed using the five core IPE competencies of; 1. Roles and responsibilities, 2. Ethical Practice, 3. Conflict resolution, 4. Communication, and 5. Collaboration and teamwork<sup>3</sup>. These also form the basis of a continuous program of assessment, distinguishing our approach from many IPE examples characterised by a discreet teaching event, while aligning our work with the principles of sustainable assessment.

We are changing the local teaching narrative within human bioscience, shifting beyond students memorising inventories of terms and facts, towards the appreciation of the future professional relevance of content and the collaborative interdisciplinary application of learning.

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## SESSION ABSTRACT

### How does utilising queer/ feminist pedagogy in a critical literacy curriculum module build students understanding of the power of language?

Anne Brady-Clark

University of South Australia

#### ABSTRACT

A pilot study was undertaken to evaluate the way students perceive the use of inclusive language, specifically in relation to gender/sexuality, during one week of teaching over a 13-week semester. Students were provided with inclusive language creative writing resources in Week 7 and in Week 12 were asked to undertake a short survey. Survey questions focused on whether the students were aware of the inclusive language used and their thoughts on using resources with non-inclusive language.

The responding participants identified as Generation Z students. Interestingly, Gen Z appear more aware of inclusivity, especially regarding LGBTQI+ issues, than Millennials, Generation X and Baby Boomers. The research is being repeated to gather more data in 2023, with the hope that different generations will engage with the survey. In an effort to research how and why pedagogical content has changed to include more gender neutral and feminist focus, this research was conducted to see if students were aware of educative resource materials that were grounded in gender neutral terminology and feminist pedagogies.

Using the above-mentioned survey methods, students were able to indicate whether they were aware or unaware of these pedagogical methods. While the initial sample of students was small, the study is being repeated with future results to be presented in 2024.

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### Unveiling an Immersive Site Experience in the Teaching and Learning of Quantity Surveying Practice: An Authentic Assessment Design.

**Thilini Jayawickrama & Ruchini Jayasinghe**  
University of South Australia

#### ABSTRACT

In teaching and learning Quantity Surveying practice, students often face challenges when interpreting and visualizing 3D structures from 2D architectural and structural drawings to take-off measurements (Suk et al., 2017) without direct construction site experience. To address this issue, the concept of Authentic Assessment is applied, which involves 'real-world' tasks enabling students to demonstrate knowledge and skills within an educational framework (Swaffield, 2011). Integrating immersive learning technologies into authentic assessments has emerged as a focal point, allowing students to engage with content in a hands-on, applicable manner (Lim et al., 2023).

Given the growing demand to incorporate digital technologies into construction education (Babatunde & Ekundayo, 2019), this study aims to provide students with an immersive experience using a 3D model when taking-off measurements in Quantity Surveying practice. A 3D model of a residential construction site undergoing trench excavation was designed using drone and laser scan technologies for formative assessment purposes.

The assessment process follows a reverse approach, deviating from conventional practices in formative assessment. Students navigate the immersive environment to understand footing layouts. They then take-off measurements directly from the 3D model and draw the footing layout, including major dimensions. Finally, students cross-reference their output with the provided answer file, which contains the actual 2D footing plan of the selected site.

Incorporating immersive site experiences into Quantity Surveying education empowers students to read and interpret 3D models into 2D drawings effectively. This approach enhances student understanding of construction through the immersive experience while fostering technical literacy in navigating and comprehending the 3D model. The assessment reinforces academic integrity through independent error analysis and self-evaluation.

The concept of 3D modelling underpinned by the theoretical stance of "immersive authentic assessment designs" can be applied across various courses and domains to provide an immersive experience in teaching and learning. This can be particularly beneficial for laboratories and any field sites that are logistically complex to visit or inaccessible. This approach further enables self-directed and student-centric learning experiences, catering to a fully online learning environment. The immersive authentic assessment designs therefore have the potential and a pivotal role to transform and enrich the way students engage with course material and learning, by creating hands-on learning experiences.

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## SESSION ABSTRACT

### A Mathematics Module in Construction Management and its impact on students' learning in Maths-related courses.

**John Hicks, Danda Li, Rob Freda, Rhoda Abadia**  
University of South Australia

#### ABSTRACT

The UniSA Online (UO) construction management (CM) program has emerged as a highly attractive option due to the critical demand for construction professionals. Proficiency in mathematics is crucial in various CM aspects, such as estimating, budgeting, productivity, and dimensioning-scaling (PM Problems, 2021). The mathematics involved encompasses precise measurements, unit conversions, complex calculations, scale factors, trigonometry applications, and CAD diagram interpretation (Lee et al., 2014). However, a substantial portion of CM students exhibit gaps in their foundational mathematics knowledge, affecting their progress and academic achievements. This study emphasizes the importance of addressing these deficiencies for success in construction management.

The UO Mathematics Module is designed in alignment with the constructivist approach, acknowledging that learners construct their own understanding. It introduces essential elementary concepts relevant to the CM program (Duchesne et al., 2022, p. 232) and provides real-world applications to enhance motivation (McInerney, 2014). The module offers a secure environment for learning through experimentation (Howe & Berv, 2000) including practice quizzes with unlimited attempts, promoting active engagement and "learning by doing." This presentation highlights the educational theories considered during the development of the UO Mathematics Module, aimed at addressing students' mathematical proficiency gaps within the CM program.

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## SESSION ABSTRACT

### Academic Development as mentoring: possibilities from the field.

**Bopelo Boitshwarelo & Claire Aitchison**

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#### ABSTRACT

As demand for online study grows exponentially, institutions need to expand the capacity of their staff to learn new skills in design, delivery and evaluation of quality online courses (Crawford et al 2020). Institutions typically provide a range of staff development options such as workshops, online resources, technical support and in-the-moment help centres. Academic Developers are centrally placed in this dynamic.

This presentation explores the potential for academic development to provide a more holistic approach through mentoring. When educators work in respectful, collaborative mentoring partnerships with Academic Developers, both parties can experience long-term and satisfying skills development (Guccione & Hutchinson 2021; Carmel & Paul 2015). Using practitioner reflection and a case study approach this presentation re-conceptualises key aspects of academic development practice as a form of mentoring (Pleschová & McAlpine 2015).

The case studies from two Australian universities demonstrate contrasting mentoring activities that share common characteristics of trusting and purposeful relationships, genuine collaboration to meet shared objectives, and connections to other communities of learner according to contextual circumstances, including power dynamics, policy and institutional structures.

The presentation concludes that mentoring is a viable pedagogical practice of academic development, which is most effective when it is needs-driven and of mutual benefit. The implications for educators, academic development units and institutions is that mentoring needs to be more intentional, particularly for new teaching practitioners or those new to particular contexts.

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# Impact of the physical learning environment on teaching in higher education.

**Eliza Kitchen & Kristin Bailey**  
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## ABSTRACT

This presentation will provide an overview of literature and methodology that have guided the development of an exploratory study which aims to explore the educator's perspective of physical environment design in higher education.

Previous research (see for example Closs et al., 2022) has indicated that the physical classroom environment and the pedagogical environment can have an impact on the learning experience and learning outcomes. Whilst knowledge and understanding of pedagogical practice has led to modernized approaches in teaching in higher education, such as active learning (Hao et al., 2020), the physical classroom environment has not adapted as much. French et al. (2019) suggest that environments designed for a didactic teaching approach can be a barrier for innovative pedagogy and more flexible learning environments are desirable (Hoidn, 2017).

Whilst the majority of research on the physical learning environment captures the student perspective (Hao et al., 2020; McNeil & Borg, 2018), this study will focus on the teacher perspective by identifying the importance of the physical environment for teachers, the factors of the physical space that are least desirable and the methods used to overcome physical barriers.

This study will investigate the influence that certain specific factors of the physical learning environments such as size, lighting, acoustics, seating, mobility, and technology, have on teaching and learning. Although students and educators may be involved in different types of classes, this study will focus on the two most common types, lectures and seminars. This presentation will outline the literature and methodological design of the study which aims to capture the educators viewpoint on physical environment factors that can influence teaching, and strategies to overcome these barriers.

The presenters will explain the design of an online survey and follow up interviews in order to gain feedback on the study design and potential for further research, such as inclusive learning environments.

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# AI Writing Tools Are Here To Help....

**Heather Prider & Scott Copeland**

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### ABSTRACT

The purpose of the study is to explore the educator's appetite for the use of Ai writing tools by students in assessments. This is done in the paper by using a novel application of the established marketing theory the 'Zone of Tolerance' (Johnston 1995; Zeithaml 1993).

The Zone of Tolerance can be applied when considering assessment by categorising specific tasks into three levels (Gwynne 2000). 'Unacceptable' where the educator does not consider it appropriate for students to utilise to complete the assessment. 'Complementary' where educators are accepting that Ai writing tools can be utilised by students in the initial development of their submission but further development by the student with referencing is required. 'Integral' where the educator has built the use of Ai writing tools into the assessment tasks requiring students to review and analyse Ai writing tools output as part of their submission.

This paper investigates individual educator's tolerance of the use of Ai tools by presenting them with a series of assessment tasks that identify the use of Ai in completing the tasks as "unacceptable" through to "integral" and then exploring their willingness to incorporate a similar task into their own teaching. Educators are asked about their knowledge of various Ai tools and their understanding of the capabilities of these tools to determine if this impacts their level of tolerance.

Findings are developed from a mixed method approach (Bazeley 2015), using a combination of survey and staff interviews to determine tolerance levels of individual staff and investigating their reasoning when deciding on assessment tasks. In addition, the willingness of staff to make changes is considered and the importance of staff being fully engaged for the change to be successful (Fullan 1991).

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No refs



### CATs – The Next Level.

**Siamak Mirzaei & Masud Karim**

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#### ABSTRACT

The Muddiest Point and the Minute Paper are two simple Classroom Assessment Techniques (CATs). CATs are primarily utilised to evaluate student learning in non-graded formative assessments (Angelo and Cross 1993).

The focus of the Muddiest Point is on the complex content where students need further clarifications. The term 'muddiest' means 'most unclear/confusing'. Mainly, students are asked to respond to one simple question: 'what was the muddiest point?'

The focus of the Minute Paper is on student learning (i.e., gaining knowledge, or not). The question(s) would be more like 'what was presented most clearly?', 'what was difficult to understand or comprehend?', 'what could be improved?', etc.

Per UniSA guidelines, Academics are advised to use muddiest points via Moodle survey tool to get student feedback. At UniSA Online, previously we utilised the Muddiest Point to obtain feedback from students and then mitigate the student difficulties by providing clarification in discussion forums, glossaries, or recording short-response videos. Also, we used the Minute Paper via Moodle Feedback to get responses from students for 5-8 well directed questions. The aim of these questions was to check student progress, content clarity, content difficulty, possible quick fix, and improvement. Then, we compiled the responses to the activities and addressed student difficulties accordingly in a similar way. The two above-mentioned methods worked well, however; the student engagement was not stable among different courses. Thus, in recent deliveries, based on the feedback received from Academia and our students, we decided to test some new ideas. Firstly, there were new questions to ask about both "crystal clear" and "muddy points". Secondly, discussion boards (not anonymous anymore) were used instead of the survey tool. Yet another idea was to add different question types (e.g., multiple choice, open-ended, etc). Also, adding visual perceptions and interactivity (e.g., H5P activities) could help. Finally, the fact that students were encouraged to do this activity (or not) was considered.

The above-mentioned changes are not mere changes from one approach to another of CATs. Rather the move was well planned to move from negative questioning towards positive questionnaires. The change was to keep the CATs attractive and cheap (Mosteller, 1989), simple and quick (Phye, 1996), useful for future course revisions (Clarson, 2015), source of more information in a shorter time (Mann, 2005), useful to motivate students (Angelo and Cross, 1993), and helpful for information analysis (Clarson, 2015). Our analysis of the responses from students shows that use of positive terminology and new approach in online/in-person cohorts (as mandatory/optional activities) encourages students to complete the activities and

support student learning and engagement.

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# Virtual Reality's Journey to Scaling and Accessibility in Construction.

Rhodora Abadia, Jonathan Fritsch, Shokry Abdelaal, Thilini Jayawickrama  
University of South Australia

## ABSTRACT

The integration of Virtual Reality (VR) in online learning presents a promising avenue for creating unique and immersive learning experiences in the field of construction management education. Traditionally, site experiential learning has been crucial for students in this domain, but physical limitations, such as safety concerns and accessibility issues, have posed challenges even before the pandemic (Aliu & Aigbavboa, 2018; Mitrovic et al., 2016).

As construction management courses continue to be delivered online post-pandemic, accessing building sites for experiential learning becomes increasingly difficult for remote students. In this context, immersive VR offers a compelling solution (Abadia, Calvert & Dasika, 2020; Krokos, Plaisant, & Varshney, 2019). VR creates a computer-simulated environment that delivers a high level of immersion, enabling students to feel as if they are "there" in the virtual setting.

To address these challenges, our project team developed an immersive and mobile VR applications, focusing on wood frame roofing construction. Students engage in a virtual construction site, where they skilfully sequence a domestic timber-framed roof. Early results indicate that VR in online learning as an educational tool has garnered positive outcomes, enhancing student engagement and overall learning experiences. This has been successfully integrated as a learning activity, which highlights the potential for integrating virtual models and creating authentic VR case studies in construction management courses.

This roundtable focuses on three key aspects: scalability, accessibility, and the development of VR technology. We will discuss insights why the construction course was chosen for piloting the VR application's potential.

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# Empowering Teaching Academics to Engage in Scholarship of Teaching and Learning.

**Bev Rogers & Samantha Kontra**  
Flinders University

## ABSTRACT

Scholarship of Teaching and Learning ('SoTL') is fundamental in higher education (Freudenberg, 2012). Even though SoTL is not new, this phrase often causes uncertainty amongst academics who are unsure about what it means and how to engage in it, especially given the dominance placed on research grants and publications. Aligning 'publication' with research also devalues sharing and communicating SoTL.

This presentation explores a project that actively encourages and supports staff across two Flinders University Colleges to engage in SoTL in an interactive workshop environment. The authors requested and were given permission from the Higher Education Research and Development Society of Australasia to use the first two of five SoTL modules to develop a series of interactive SoTL workshops, given the high quality of the resources and obvious applicability.

SoTL encompasses 'activities concerned with gaining new or improved understanding, or appreciation and insights into a field of knowledge, or engaging with and keeping up to date with advances in the field' (Tertiary Education Quality and Standards Agency, 2022). This clearly incorporates many activities of a teaching academic. However, is a broader meaning to scholarship in teaching research and dissemination is key. According to Shulman (1999) scholarship requires an academic's work to be:

- Made public;
- Available for peer review and critique according to acceptable standards; and
- Able to be reproduced and added to by other scholars.

We realised that academics had varying understandings of SoTL, and despite creating excellent SoTL projects, academics do not often disseminate this work beyond their teaching program. Many academics are also new to SoTL and need guidance (Dewar and Perkins, 2021), or do not realise that they are actively pursuing SoTL and later feel that they have just 'stumbled across SoTL' (Sturges, p.2).

Our SoTL engagement project commenced in 2023 under the College of Business, Government and Law Learning and Teaching Academy. It focuses on staff engagement with SoTL through a series of interactive workshops that gave staff the time and space to understand SoTL, collaborate with colleagues, design a SoTL project in a supported environment, carry out the project, and write it up for dissemination. This project, endorsed by the Deans (Education) and Pro Vice-Chancellor (Learning and Teaching Innovation) also encouraged cross-College collaboration between the Colleges of Business, Government and Law as well as Education, Psychology and Social Work.

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## SESSION ABSTRACT

### Redesign process and expansion of an existing undergraduate Medical Science program incorporating industry perspectives.

**Voula Gaganis & Medical Sciences Teaching Team**  
Flinders University

#### ABSTRACT

The identity of a medical scientist can take on various forms due to the wide-ranging nature of the field, encompassing diverse disciplinary areas and their practical applications. For instance, a medical scientist could be involved in conducting clinical trials to test new treatments, analysing clinical data to identify trends, undertaking research to make new discoveries, or serving as a medical laboratory scientist performing crucial diagnostic work. The versatile nature of the role underscores the disciplinary diversity and vast employment opportunities across the medical science sector.

At Flinders University, the undergraduate Medical Science course was developed in the late 90's. Traditionally designed to offer foundational studies in the basic sciences, followed by specialised biomedical sciences, the program of study consisted of vast topic choices for students to design a bespoke program that represented the 'medical scientist' they wanted to be. However, over time a prevailing perception developed among students that the course served as an optimal pathway to postgraduate medicine studies. This inadvertently limited the broader recognition and utilisation of college-based research strengths and the diverse skill sets and potentials fostered within the program; a possible contributor to the overall skill shortage across the healthcare sector. [1]

In 2020, the Medical Science leadership and teaching teams began a generational redesign of the program. Key aims were to review course Learning Outcomes (LO's) and program of study; reveal the programs' disciplinary strengths and align with contemporary community and industry needs. Our industry partners provided crucial insights into including the declining workforce in regional diagnostic pathology laboratories and an overall aging workforce. Evaluation involving a broad range of stakeholders also identified that expansion of the program to include a specialisation – Laboratory Medicine was needed. Flinders University are taking a Fearless approach in upskilling the next generation of medical laboratory scientists with a focus on Professional Placement in the South Australian regions.

Acknowledging that disruption can challenge existing norms, an intentional crafting of the curriculum was initiated using 'backward design', an approach commonly used in course redesign. [1,2] The process began with bringing the course teaching team together to design new course LO's. We then consulted with external and internal stakeholders, including students and graduates, to reveal valuable perspectives. The insights gained from these discussions played a crucial role in shaping the redesigned course and ensuring it met industry demands.

Our key learnings in successful and effective course redesign are

to ensure relevant teams are brought on the change journey together with the team leading the changes; facilitate open communication and maintain transparency throughout decision making; clarity on goals with intentional design of LO's; and broad strategic collaboration to foster a wide-ranging perspectives.

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## SESSION ABSTRACT

### Leveraging Collective Expertise: University academic staff with discipline specific knowledge as catalysts for enhancing course design.

**Philip Johnson & Scott Copeland**

University of South Australia

#### ABSTRACT

The dynamic landscape of higher education calls for continuous improvement in course design and delivery to meet the diverse needs of modern learners. As universities strive to enhance teaching and learning experiences, the role of experienced academic staff with discipline specific expertise as dedicated support providers has gained prominence. This paper explores the transformative impact of an expert academic “@ Elbow” staff team in empowering colleagues to improve course websites, design authentic assessment, and effectively create and use media in course delivery.

We acknowledge the challenges universities face in integrating technology and pedagogy effectively. The @ Elbow team serves as mentors and coaches (Hollweck, 2021; Valentine, 2019), guiding colleagues in optimising course website design to create a more seamless learning experience for students. In order to meet the call for authentic assessment the @ Elbow team collaborates with colleagues to design diverse and relevant assessment that mirror real-world challenges. The paper delves into the impact of authentic assessments on students’ critical thinking, problem-solving skills, and application of knowledge (Wiewiora & Kowalkiewicz, 2019). It highlights the @ Elbow team’s role in facilitating workshops and one-on-one consultations to support colleagues in adopting authentic assessment strategies. The importance of multimedia integration in course delivery has grown, as has students’ preferences for diverse and interactive learning experiences. This paper highlights how the @ Elbow team provides guidance on creating and/or selecting appropriate media tool to enrich content and deepen students’ understanding.

The paper underscores the value of collaboration and knowledge-sharing among colleagues facilitated by the @ Elbow team. By fostering a culture of collaboration and innovation, the @ Elbow team empowers fellow staff academic staff to explore creative teaching approaches and embrace technological advancements. The study also examines the impact of tailored professional development initiatives conducted by the @ Elbow team. Workshops, presentations, and T&L symposiums enable educators to share best practice within an institution. The paper highlights the importance of creating a supportive learning community that encourages the exchange of ideas and experiences among academic staff.

The paper acknowledges potential challenges in implementing the academic staff support model more broadly, including limited resources, time constraints, and staff resistance to change. Strategies for overcoming these barriers are presented, emphasising the need for institutional commitment and ongoing support. This research advocates for the collaborative efforts of experienced academic staff in fostering excellence

in course websites, authentic assessment, and media integration in higher education. Through their dedicated support, the @ Elbow team empowers academic staff to embrace pedagogical advancements and improve learning experiences. The paper offers valuable insights and best practices

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## Workshop. Practical advice on implementing a blended learning model.

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### ABSTRACT

#### Workshop Description

Participants in this workshop will learn strategies to implement a blended learning model in their own class. Practical advice on minimizing the challenges of a blended classroom model will be explored in the context of the educator's student cohort. To make the most of this workshop, participants are encouraged to bring a content example they wish to adapt for blended learning. Participants are further encouraged to share student cohort details and any perceived challenges or limitations.

#### Background

Modern education faces challenges stemming from the allure of flexible learning options and online content. This has led to decreased attendance in traditional synchronous learning settings. Our workshop addresses these challenges by promoting a student-centred approach that encourages engagement and success.

Blended learning fosters a sense of ownership over learning. Blended learning models merge preparatory online work with collaborative in-person sessions. This approach promotes deep understanding by immersing students in the material (Islam et al., 2022; Shih et al., 2019). Moreover, our workshop emphasizes the value of timely feedback during complex problem-solving, facilitated by both educators and peers (Barral et al., 2018).

Research into blended learning environments in the university context has documented that students value the opportunity to apply content as well as the peer-peer and student-educator interaction (Smallhorn, 2017). Other positive outcomes include increased student attendance, and overall engagement in learning and student reports of deeper learning and high levels of satisfaction (McLaughlin et al., 2013; Mestan, 2019). Some research supports improved learning outcomes (Eichler & Peeples, 2016), demonstrating the effectiveness of blended learning models.

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