Learning and Teaching in an AI World

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24 September 2024
University of South Australia

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Sarah List	Program Design
Edward Palmer	Program Design
Karl Larsen	Design Template

Thank you to all the volunteers who assisted on the day.

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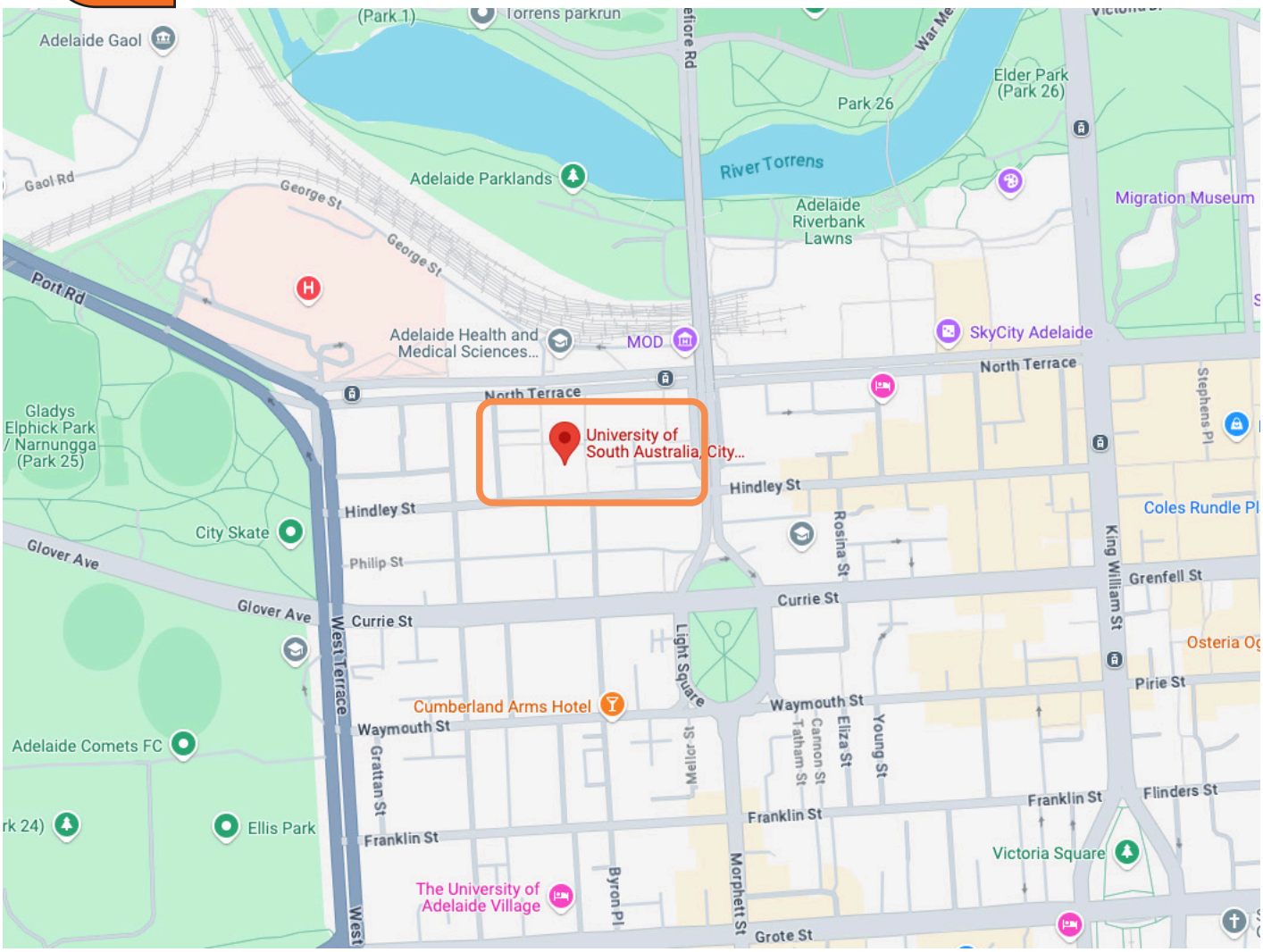


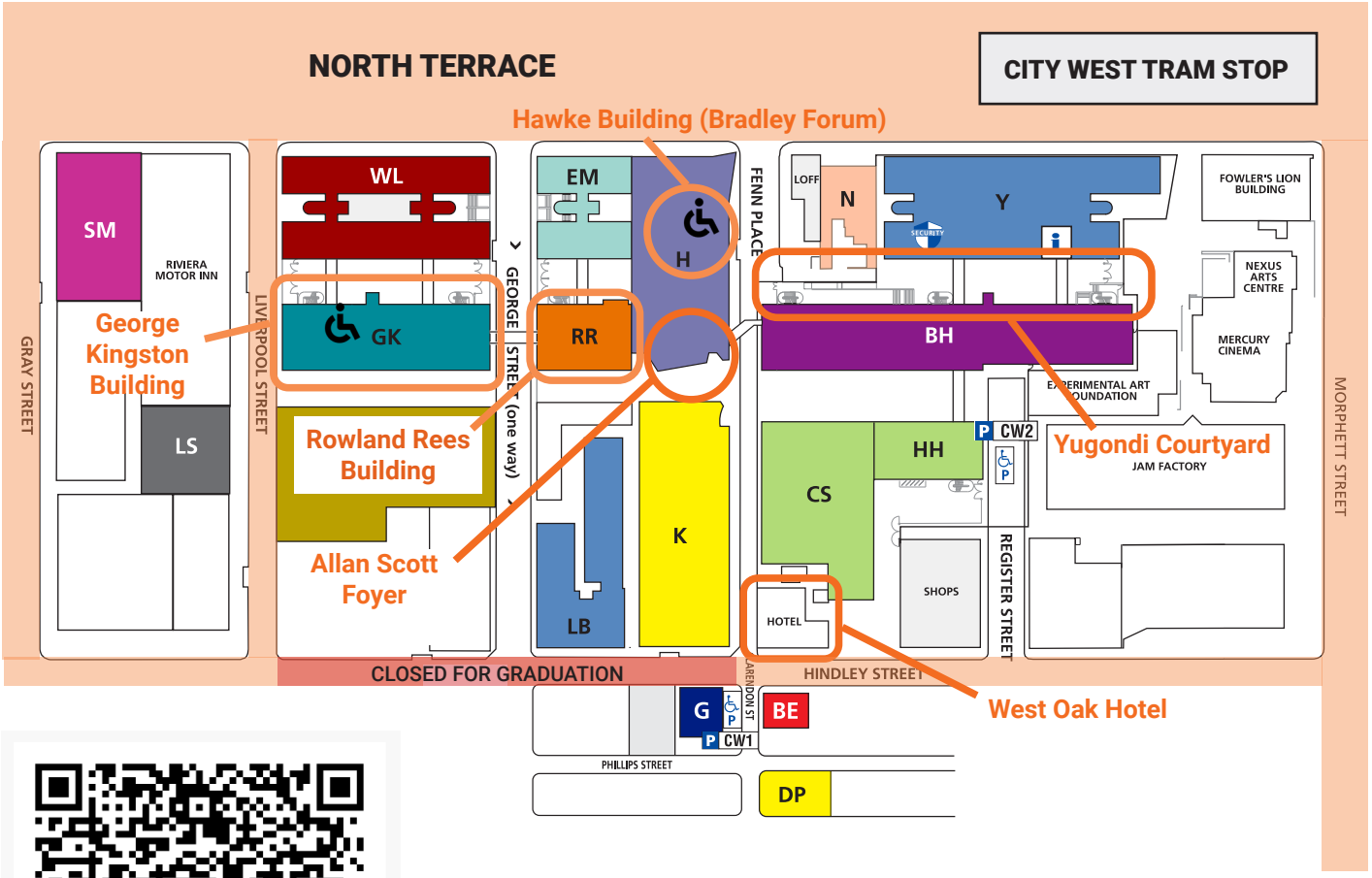
The UniSA City West campus is located between North Terrace and Hindley street in the northwest corner of the Adelaide Central Business District.

TRAIN AND TRAM

The campus is 2 minutes walking distance from the City West tram stop on North Terrace and approximately 10 minutes was from the main Adelaide Railway Station.

Tram routes around the CBD are free. The free zone is the area between the South Terrace stop, Adelaide Entertainment Centre, Festival Plaza and the Botanic Gardens.

CITY WEST CAMPUS



The conference registration desk will be located in the Allan Scott Foyer - which is in the southern end of the Hawke Building.

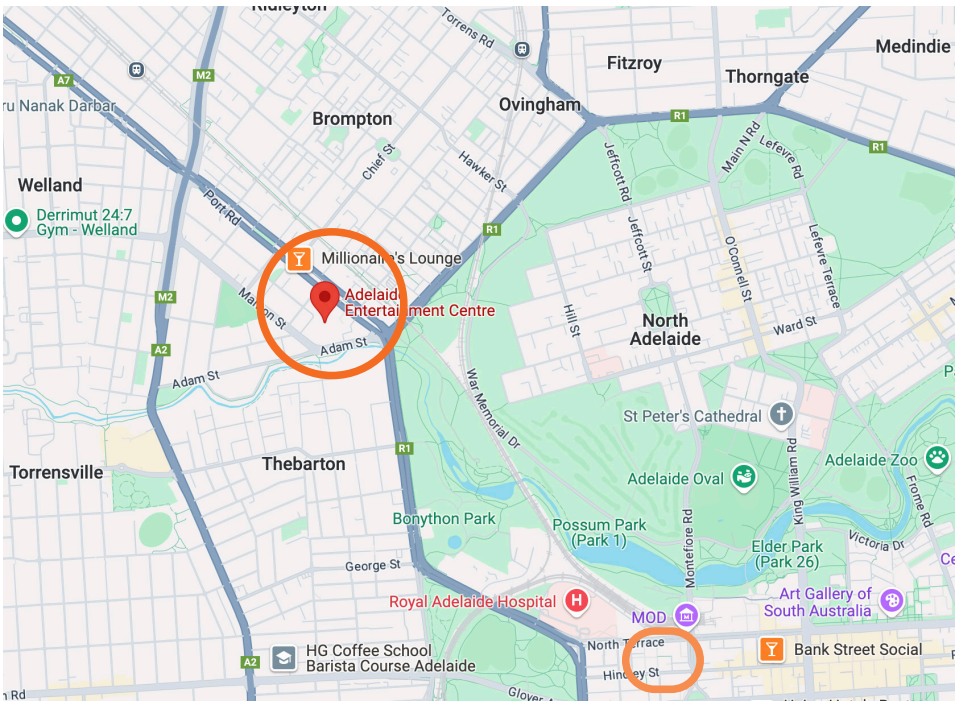
CAR PARKING

UniSA Graduations are running during the conference week, and will be in full swing through the Hindley street section of the campus around Pridham Hall. The Wilson Car Park on Clarendon Street will therefore likely be full for most of the day. Better options for parking can be found at:

Adelaide Entertainment Centre - Park 'n' Ride

The Adelaide Entertainment Centre's Park 'n' Ride means you can park at the Adelaide Entertainment Centre and catch the FREE city tram. One-way travel to the CBD takes approximately 10 – 12 minutes, with frequent tram services operating during peak morning and afternoon travel periods.

$5 Park 'n' Ride fee is applicable between 5am – 6.30pm daily for entry prior to 5pm

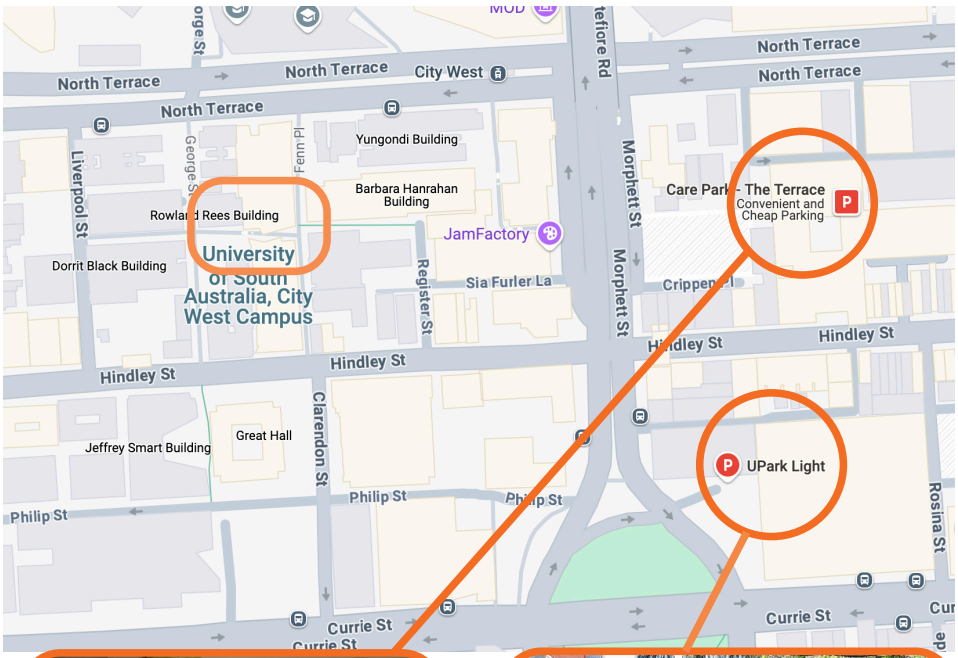


Care Park - The Terrace

The Terrace at 122 Hindley Street is a 5 minute walk to the campus and has early bird rates. Enter between: 6am – 10am and exit between: 2pm – 7pm the same day. Rates are $16, or $14 if booked online.

U Park Light Square

The TAFE SA car park at 22-140 Currie Street is also 5 minutes walk to the campus and has an early bird rate of $17 for entry by 8:30am and exit 3pm–7:pm.



WI FI ON CAMPUS

Visitors and Guests connecting to eduroam

If you are visiting UniSA from a participating institution you can connect to the **eduroam wireless network** using your login credentials (username and password) and security settings from your home institution. Otherwise you can access **Guest WIFI** via the QR code below,

If you have issues connecting you will need to contact your home institution's IT Department for further assistance because UniSA has no control over your log in details.

You must enter your full username including domain (e.g., jsmith@institution.edu.au). So for UniSA staff visiting other institutions, you would login with:

Username: <username>@unisa.edu.au
Password: <Your normal UniSA password>

NOTE: There is no need to use a VPN connection unless you need access to a specific service at your home site.

IMPORTANT

Use of the eduroam wireless network is governed by the Australian eduroam policy and UniSA's Acceptable use of Information Technology (IT) facilities policy.

Further Assistance

If you require further information or assistance, please contact the IT Help Desk on (08) 830 25000 or 1300 558 654. https://i.unisa.edu.au/askit/all/eduroam/visitors/

START	DURATION	EVENT			
8:00	30 MINS	**Registration | Allan Scott Foyer (H2-16) (moves to Outside Bradley Forum H5-02 after morning tea**			
8:30	5 MINS	Opening Address | Allan Scott H2-16 (Overflow venue | Bradley Forum H5-02) Prof. Esther May, Dean of Clinical Education, University of South Australia			
8:35	20 MINS	Welcome to Country | Allan Scott H2-16 | Jack Buckskin			
8:55	5 MINS	SA State of AI Address: Eva Balan-Vnuk, Executive and Chief of ICT, Digital and Cyber Security of South Australia Government			
9:00	60 MINS	Keynote | Allan Scott H2-16 Prof Danny Liu, University of Sydney			
		Panel Moderator: Nick Fewster-Young | Allan Scott | Overflow venue | Bradley Forum H5-02			
10:00	40 MINS	Prof Tania Leiman Dean of Law, College of Business Government and Law, Flinders University	Prof Danny Liu DVC Education, University of Sydney	Dr Eva Balan-Vnuk South Australia Government	A/Prof Wolfgang Mayer Industrial AI Research Centre, UniSA
10:40	30 MINS	**Morning Tea | Yungondi / BH courtyard**			
		SoTL | RR5-09	**AI, Ethics & Academic Integrity GK5-15**	**Innovative Approaches in Teaching and Learning GK4-30**	**Authentic Assessment Bradley forum H5-02**
11:10	40 MINS	Analysing Cognitive Engagement in Online Discussion Forums using the ICAP Engagement Framework Liu, Ruchini, Kaur, Li and Thankanamalage	Transparent, critical, ethical: Innovative assessment design in the context of artificial intelligence Stokes and Pike	Generative Artificial Intelligence: Integrating Platforms and Activities for Student Use Baulk and Godwin	Improving scholarship of learning and teaching, through peer feedback in authentic assessments. Emery, Shephard and Matthews
11:30		Case studies and perspectives on the collaboration of interdisciplinary education-focused academics to foster shared practice, skill development, and Scholarship of Teaching and Learning Bickford, Gaganis, Smallhorn, Standish, Bastani and Tanour	Academic Integrity and Academics' demonstrating 'trustworthiness': Towards walking the walk in the Age of Artificial Intelligence Picard and Akbar	Calibrating metacognitive monitoring through regular reflective writing and self-regulated learning strategies: A case study of an undergraduate education Mottaghi, Sreko, Mirraihi, Dawson, Jovanovic, Thommadurage, Gamage and Mills-Bayn	Simulated Clinical Competency testing in computed tomography (CT) skills: An innovative approach to ensure work-ready graduates Giles

		Practical Uses of AI | RR5-09	Technology Enhanced/Theories Supporting Learning | GK5-15	Innovative approaches in Teaching and Learning | GK4-30	Authentic Assessment Bradley forum H5-02
11:55	**60 MINS**	Interrogating academic readings using ChatPDF: A qualitative case study of international student preparation for participation in postgraduate seminars Restall and Pham	Evaluating student and teacher perspectives of blended learning personalisation supported by artificial intelligence McCarthy, Palmer and Falkner	A Pedagogy for Embedding Artificial Intelligence and Technology across CBGL MBA Programs for Future Workforce Preparedness Shafei, Tanouri, Abedin and Pereira	The future of healthcare-Simulation-based learning environments and preparing future midwives for effective rapport building in telehealth settings Jones and Cominos
12:15		From Manual to Automated: The Efficiency of Gen-AI in Course Development Airey, Nagy and McInnes	A simple approach to introduce first-year students to appropriate and ethical use of Generative Artificial Intelligence tools in the health sciences. Ankers, Llewelyn and Matwiejczyk	Course-Tailored AI in Education: Integration of Context-Free Grammar for Dynamic Learning and Feedback Adaptation Chowdhury, Abadia and Abdelaal	Using Digital Storytelling as a Pedagogical Approach to Enhance Engagement, Knowledge Acquisition and Employability Skills in Online and Hybrid Teaching Modes. Ludwichowska-Alluigi and Orlovic
12:35		From Critical Theory to critical practice: gen-AI integration in higher education McInnes, Nagy and Airey	StudyBuddy: An Agentic AI Teaching Assistant for Enhanced Computer Science Education Khdair and Sundarapperuma	Emotions Matter: Innovative Approaches to Student Support and Teacher Roles in Asynchronous Online Learning Environments Lake, Carter and Hattam	Scaffolding Authentic Research Projects Across Undergraduate Degrees Young Kirby
1:00	**60 MINS**	**Lunch | Yungondi / BH courtyard**			

		Workshops | RR5-09	AI, Ethics & Academic Integrity | GK5-15	Assessment design in the Age of AI | GK4-30	Workshops/Roundtables | Bradley forum H5-02
2:00	**40 MINS**	Designing for Learning Klapdor	Navigating Ethical AI Integration in Higher Ed: Academic Insights from Torrens University Australia Dissanayake, PourMirza, Perera	Programming assessment revisions to recapture assessment validity in the face of GenAI Honan	Navigating AI tools for Undergraduate assessment pedagogy: Instruction, utilisation, and Integrity Davey, Barnes, Della Vedova and Tan
2:20			Is learning with ChatGPT really learning? Winterburn, Stolz and Palmer	A comparison of generative AI applied to university assessment tasks across multiple disciplines Wadhawan, Antony, Keogh and Wallace	
2:45	**40 MINS**	Enhancing student success and retention: Leveraging learning analytics and student engagement strategies Enright, Harrison, Kitchen, Kontra and Smallhorn	Using forensic techniques to identify cheating, by use and abuse of AI, in student submissions. Walker	Embracing AI in mathematics assessment Nguyen and Tronnolone	The Human-in-the-Loop Model: Integrating AI into Education - Perspectives from Health and STEM Academics Butler, Tan and Darzanos
3:05			Don't Be Sorry, Just Declare It: Pedagogical principles for the ethical use of ChatGPT, master bullshit artist of our time. Cao	Reviewing and Rethinking assessments in the age of Gen-AI: An action research study Thakkar, Rajasekaran, Moore, Ehya, Hillsley and Burgess	
3:25	**20 MINS**	**Afternoon tea | Yungondi / BH courtyard**			

<table>
<tr><th></th><th></th><th>Workshop | RR5-09</th><th>Students and AI | GK5-15</th><th>Study Behaviours | GK4-30</th><th>Workshops
Bradley forum H5-02</th></tr>
<tr><td>3:50</td><td rowspan="2">40 MINS</td><td rowspan="2">Authentic Assessment in a World of Artificial Intelligence

Hunter, Smallhorn, Young Kirby,Tan</td><td>An AI approach for predicting the behavioural intention and perceived effectiveness of the use of ICT by postgraduate students to support their research

Lumsden, Shafi Abady, Chatteur</td><td>The Relationships Between Students' Expectations, Approaches to Learning, Academic Performance, and Wellbeing in an Online Undergraduate Program

Mingoia, Engfors, Le Busque and Burton</td><td rowspan="2">Developing Ethical IT Professionals: A Focus on Values in the Age of AI

Fernando, Darzanos, Wahlstrom and Evans</td></tr>
<tr><td>4:10</td><td>What do our students think? Perceptions and attitudes of healthcare students relating to artificial intelligence (AI)

Arruzza</td><td>I'll do it later: Understanding learning strategies and procrastination behaviours in a blended first-year quantitative methods course for health sciences students

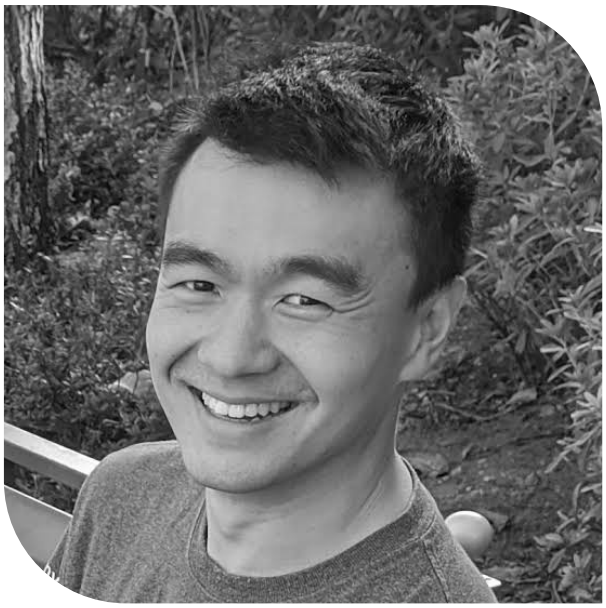
Korolkiewicz, Joksimovic and Wang</td></tr>
<tr><td>4:30</td><td colspan="5">Close, Prizes Bradley forum H5-02 - then Drinks | West Oak Hotel Hindley St</td></tr>
</table>

0830	Conference Opening / Welcome / Keynote Presentation			
1000	Panel Session Allan Scott H2-16			
1110	SoTL RR5-09	AI, Ethics & Academic Integrity / Tech Enhanced / Theories Supporting Learning GK5-15	Innovative Approaches in Teaching and Learning | GK4-30	Authentic Assessment H5-02 Passcode: 153980
1400	Workshops RR5-09	AI, Ethics & Academic Integrity | GK5-15	Assessment design in the Age of AI GK4-30	Workshops / Roundtables Bradley forum H5-02 Passcode: 703291
1550	Workshop RR5-09	Students and AI GK5-15	Study Behaviours GK4-30	Workshops Bradley forum H5-02 Passcode: 302167

KEYNOTE / WORKSHOP SPEAKER

Professor Danny Liu

University of Sydney



A molecular biologist by training, programmer by night, researcher and academic developer by day, and educator at heart, Danny is passionate about student engagement, infusing technology in learning & teaching, the first year experience, learning analytics, and really anything where students are the focus. He works at the confluence of educational technology, student engagement, artificial intelligence, learning analytics, pedagogical research, organisational leadership, and professional development. He is currently a Professor in the Educational Innovation team in the DVC (Education) Portfolio at the University of Sydney, and ha received a number of awards for his work.

KEYNOTE PRESENTATION

Present realities and future strategies: Practical ways forward with generative AI

Anxious about generative AI? You're in good company – I am too. Join in as we explore the fast-moving space of generative AI and its implications for teaching, learning, and assessment. We'll consider the current state of the technology and its capabilities, dig into what makes it tick, and how we might support and assure learning while leveraging AI. We will also think bigger and discuss the opportunity space opened by generative AI, ponder what we want students to learn, and then land on what we need to do at different levels of the institution to productively and responsibly engage with it.

PANEL SESSION

Professor Tania Leiman
Flinders University Dean of Law

In a rapidly changing world with complex challenges, Tania is committed to educating legal professionals who can identify opportunities for innovation, understand impacts of emerging technologies and use this knowledge and skill to increase access to justice.

Tania is a Teaching Specialist (Clinical Practitioner) with a focus on Clinical Legal Education. She has received multiple individual and team national, university and faculty teaching excellence awards. She supervises honours students researching the legal implications of emerging technologies.

Tania's current interests connect around the question: 'What does it mean to be human in a digital world?'

She's written and presented nationally & internationally on law and emerging technologies (including sex robots and ovulation apps), future mobility (including automated vehicles and advanced driver assistance systems [ADAS]), disruption in the legal profession, artificial intelligence and legal tech, and the future of legal education. She just started doing some work on the legal implications of neurotechnologies.

Tania is a member of the Law Council of Australia's Future Committee and the Law Society of SA's Legal Technology Committee, and has formal qualifications in innovation for transformation. She is also the Council of Australian Law Dean's Vice Chair of Legal Education.

Dr Eva Balan-Vnuk
Executive and Chief of ICT, Digital and Cyber Security of SA Government

With her team, Eva provides critical whole of government digital, technology and cyber security services including email, connectivity and collaboration tools that enable more than 100,000 public servants to deliver services to the South Australian community.

Prior to this role, Eva worked for Microsoft in Europe, Asia and Australia, including State Director for Microsoft South Australia. Eva has a PhD in innovation and entrepreneurship from the University of Adelaide, with her thesis focused on the strategic concepts that inform the business model strategies of non-profit social enterprises.

Eva is Founder of HerTechPath Incorporated, a grass-roots social enterprise dedicated to celebrating and inspiring careers for women and girls in the technology sector. She also contributes as a Director for Novita, and she is a Trustee of the History Trust of South Australia.

Associate Professor Wolfgang Mayer
University of Adelaide

Associate Professor Wolfgang Mayer is passionate about developing novel Artificial Intelligence technologies to help answer important questions in industry, healthcare, engineering, and Defence. His focus is on applied research where domain knowledge combined with data can provide solutions that mainstream "Big Data" and Machine Learning techniques cannot address. My expertise combines state-of-the-art machine learning & data analysis techniques, natural language processing technologies, and the "traditional" logic-based knowledge representation and reasoning techniques used for modelling, configuration, and diagnosis of technical systems.

He is a core member leading in the Industrial AI Research Centre at UniSA with strong links with industry and Defence, and a board portfolio of applied research collaborations. He is currently working on AI Chatbots and their implementation in large service courses (statistics and mathematics) through university grant funding and previously lead projects in the development of data platforms for engineering processes (AutoCRC), asset management (CIEAM CRC and FenEx CRC), scientific data collection (ANDS), health data collection (NECTAR), information management for law enforcement (Data to Decisions CRC), manufacturing (IMCRC), risk management in healthcare (DHCRC), multiple projects in the Defence context (information provenance for network analytics, behavioural simulation models, data-driven simulation processes, network analysis, narrative extraction) and data-driven optimisation.

Invited Workshop
23rd September 2pm-5pm UniSA City West H6-03

Assessments, agents, and AI: Taking control of AI in education

Professor Danny Liu
University of Sydney

ABSTRACT

In this hands-on workshop, we'll look at two practical hot topics around AI in education: what to do about assessments, and how we might take control of AI through 'agents' to support learning. We will explore the implications of different AI tools on assessment, and consider how we might approach assessment redesign to balance authentic engagement with generative AI whilst assuring learning outcomes. We will also design and build our own AI agents and consider how these 'doubles' of ourselves might be used in a range of pedagogical contexts and help to augment and even redefine how students learn.

Abstracts

1. **Analysing Cognitive Engagement in Online Discussion Forums using the ICAP Engagement Framework.** Sisi Liu, Ruchini Jayasinghe, Rupinderdeep Kaur, Danda Li, Hansani Thanippuli Kankanamalage. UniSA Online.
2. **Transparent, critical, ethical: Innovative assessment design in the context of artificial intelligence.** Jennifer Stokes, John Pike. UniSA.
3. **Generative Artificial Intelligence: Integrating Platforms and Activities for Student Use.** Stuart Baulk, Rebecca Godwin. UniSA Online.
4. **Improving scholarship of learning and teaching, through peer feedback in authentic assessments.** Kirsty Emery, Mark Shephard, Susan Matthews
5. **Case studies and perspectives on the collaboration of interdisciplinary education-focused academics to foster shared practice, skill development, and Scholarship of Teaching and Learning (SoTL).** Jane Bickford, Voula GAGANIS, Masha Smallhorn, Alistair Standish, Peivand Bastani, Afshin Tanouri.
6. **Academic Integrity and Academics' demonstrating 'trustworthiness': Towards walking the walk in the Age of Artificial Intelligence.** Michelle Picard, Akbar Akbar.
7. **Calibrating metacognitive monitoring through regular reflective writing and self-regulated learning strategies: A case study of an undergraduate education.** Nazanin Rezazadeh Mottaghi, Srecko Joksimovic, Negin Mirriahi Mirriahi, Shane Dawson, Jelena Jovanovic, Wimukthi Thommadurage, Sithara Walpita Gamage, Martyn Mills-Bayn.
8. **Simulated Clinical Competency testing in computed tomography (CT) skills: An innovative approach to ensure work-ready graduates.** Eileen Giles. UniSA.
9. **Interrogating academic readings using ChatPDF: A qualitative case study of international student preparation for participation in postgraduate seminars.** Greg Restall, Toan Pham. UniSA.
10. **Evaluating student and teacher perspectives of blended learning personalisation supported by artificial intelligence.** Shaun McCarthy, Edward Palmer, Nickolas Falkner. University of Adelaide.
11. **A Pedagogy for Embedding Artificial Intelligence and Technology across CBGL MBA Programs for Future Workforce Preparedness.** Angie Shafei, Afshin Tanouri, Ehsan Abedin, Bruno Pereira.
12. **The future of healthcare- Simulation-based learning environments and preparing future midwives for effective rapport building in telehealth settings.** Carly Jones, Nayia Cominos. UniSA.
13. **From Manual to Automated: The Efficiency of Gen-AI in Course Development.** Laura Airey, Simon Nagy, Richard McInnes. University of Adelaide.
14. **A simple approach to introduce first-year students to appropriate and ethical use of Generative Artificial Intelligence tools in the health sciences.** Matthew Ankers, Tori Llewelyn, Louisa Matwiejczyk. Flinders University.
15. **Course-Tailored AI in Education: Integration of Context-Free Grammar for Dynamic Learning and Feedback Adaptation.** Abdullahi Chowdhury, Rhodora Abadia, Shokry Abdelaal. UniSA.
16. **Using Digital Storytelling as a Pedagogical Approach to Enhance Engagement, Knowledge Acquisition and Employability Skills in Online and Hybrid Teaching Modes.** Gosia Ludwichowska-Alluigi, Monica Orlovic. UniSA.
17. **From Critical Theory to critical practice: gen-AI integration in higher education.** Richard McInnes, Simon Nagy, Laura Airey. University of Adelaide.
18. **StudyBuddy: An Agentic AI Teaching Assistant for Enhanced Computer Science Education.** Hisham Khdair, Nadil Sundarapperuma. Global Higher Education, Federation University, TAFE SA.
19. **Emotions Matter: Innovative Approaches to Student Support and Teacher Roles in Asynchronous Online Learning Environments.** Phoebe Lake, Amanda Carter, Sarah Hattam. UniSA.
20. **Scaffolding Authentic Research Projects Across Undergraduate Degrees.** Jeanne Young Kirby. Flinders University.
21. **Designing for Learning.** Tim Klapdor. University of Adelaide.

Abstracts

22. **Navigating Ethical AI Integration in Higher Ed: Academic Insights from Torrens University Australia.** Anusha Dissanayake, Arezou PourMirza, Samudi Perera. Torrens University.
23. **Programming assessment revisions to recapture assessment validity in the face of GenAI.** Reid Honan. UniSA.
24. **Navigating AI tools for Undergraduate assessment pedagogy: Instruction, utilisation, and Integrity**. Sarah Davey, Timothy Barnes, Chris Della Vedova, Kuan Tan. UniSA
25. **Is learning with ChatGPT really learning?** Lucas Winterburn, Steven Stolz, Edward Palmer. University of Adelaide
26. **A comparison of generative AI applied to university assessment tasks across multiple disciplines.** Indu Wadhawan, Bhavna Antony, Kathleen Keogh, Morgan Wallace. Federation University, UniSA.
27. **Enhancing student success and retention: Leveraging learning analytics and student engagement strategies.** Ali Enright, Helen Harrison, Eliza Kitchen, Samantha Kontra, Masha Smallhorn. Flinders University.
28. **Using forensic techniques to identify cheating, by use and abuse of AI, in student submissions.** Stewart Walker. Flinders University.
29. **Embracing AI in mathematics assessment.** Amy Trang Nguyen, Hayden Tronnolone. Flinders University.
30. **The Human-in-the-Loop Model: Integrating AI into Education - Perspectives from Health and STEM Academics.** Mary Butler, Kuan Tan, Kathy Darzanos. UniSA.
31. **Don't Be Sorry, Just Declare It: Pedagogical principles for the ethical use of ChatGPT, master bullshit artist of our time.** Benito Cao. University of Adelaide.
32. **Reviewing and Rethinking assessments in the age of Gen-AI: An action research study.** Manisha Thakkar, Dhivya Rajasekaran, Amber Moore, Noosha Ehya, Ashley Hillsley, Danielle Burgees. Torrens University.
33. **An AI approach for predicting the behavioural intention and perceived effectiveness of the use of ICT by postgraduate students to support their research.** Jurate Julia Lumsden, Niusha Shafi Abady, Fiona Chatteur. Torrens University.
34. **The Relationships Between Students' Expectations, Approaches to Learning, Academic Performance, and Wellbeing in an Online Undergraduate Program.** John Mingoia, Laura M. Engfors, Brianna Le Busque, Olivia Burton. UniSA.
35. **What do our students think? Perceptions and attitudes of healthcare students relating to artificial intelligence (AI).** Elio Arruzza. UniSA.
36. **I'll do it later: Understanding learning strategies and procrastination behaviours in a blended first-year quantitative methods course for health sciences students.** Malgorzata Korolkiewicz, Srecko Joksimovic, Zhengzheng Wang. UniSA.
37. **Developing Ethical IT Professionals: A Focus on Values in the Age of AI.** Anisha Fernando, Kathy Darzanos, Kirsten Wahlstrom, Nina Evans. University of South Australia.
38. **Authentic assessment in the world of artificial intelligence.** Narelle Hunter, Masha Smallhorn, Jeanne Young Kirby, Liu Fei Tan. Flinders University.

SESSION ABSTRACT

Analysing Cognitive Engagement in Online Discussion Forums using the ICAP Engagement Framework

Sisi Liu, Ruchini Jayasinghe, Rupinderdeep Kaur, Danda Li, Hansani Thanippuli Kankanamalage University of South Australia

ABSTRACT

Understanding and enhancing student engagement is crucial for online learning as it reflects student satisfaction and academic achievement. Cognitive engagement is described as students' investment in learning; their strategic, reflective and self-regulatory behaviours while developing problem-solving skills (Chi and Wylie, 2014). It emphasises critical thinking skills, understanding concepts and theories, and general cognitive abilities. Online discussion forums can support student cognitive engagement.

To conceptualise different dimensions of cognitive engagement, Interactive, Constructive, Active, and Passive (ICAP) framework is used (Chi, 2009). ICAP hypothesis highlights that student cognitive engagement is increased when they move from the passive to the interactive phase sequentially (Wiggins et al., 2017). The ICAP framework has been mainly applied to synchronous learning environments, with lesser attention to asynchronous and online learning environments (Farrow et al., 2021). Of relevance to our study, Wang et al. (2015) analysed students' cognitive engagement using discussion forums in Massive Open Online Courses to explore the relationship between student participation and their learning gains. However, this study was limited to one course and its unique requirements. To address the gap, this study aims to capture cognitive engagement in discussion forums in asynchronous and fully online learning environments using the ICAP framework.

A mixed-method approach is employed, combining content analysis with statistical analysis to investigate student interactions in discussion forums. Discussion forums within the University of South Australia Online STEM courses are utilised. The study targets one IT program with four courses over four consecutive study periods from 2023-2024, with over 80 students each. From these four courses, the discussion forums are categorised into general, assessment, and weekly content and learning activities, plus characteristics such as student or teacher-initiated posts. Then ICAP framework dimensions are applied to determine the level of cognitive engagement using keywords and phrases.

The strength of this research is to contribute to understanding how to capture and analyse students` cognitive engagement in discussion forums. It provides empirical evidence in fostering cognitive engagement in online discussion forums, guided by the ICAP framework. The insights can inform instructional design and strategies to maximise student engagement in fully online learning environments. In the future, as AI becomes more common in education, it will be important to explore how forums can help maintain academic integrity and encourage genuine student engagement, beyond AI-generated content.

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Chi, M. T. H. (2009). Active-Constructive-Interactive: A Conceptual Framework for Differentiating Learning Activities. Topics in Cognitive Science, 1(1), 73–105. https://doi.org/10.1111/j.1756-8765.2008.01005.x

Chi, M. T. H., & Wylie, R. (2014). The ICAP Framework: Linking Cognitive Engagement to Active Learning Outcomes. Educational Psychologist, 49(4), 219–243. https://doi.org/10.1080/00461520.2014.965823

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Wiggins, B. L., Eddy, S. L., Grunspan, D. Z., & Crowe, A. J. (2017). The ICAP Active Learning Framework Predicts the Learning Gains Observed in Intensely Active Classroom Experiences. AERA Open, 3(2), 1–14. https://doi.org/10.1177/2332858417708567

SESSION ABSTRACT

Transparent, critical, ethical: Innovative assessment design in the context of artificial intelligence.

Jennifer Stokes, John Pike
University of South Australia

ABSTRACT

An important emerging literacy lies in understanding when, how, and when not to employ generative artificial intelligence (AI) (Bearman et al., 2024). Academics can guide students toward transparent, critical, and ethical application of AI through informed assessment design. This paper outlines research-informed approaches, and showcases examples of innovative assessment in two complementary courses on new literacies taught in Diploma programs (UniSA College, Education Futures, University of South Australia). Examples include multimodal assessments which highlight creativity and production skills, and search design which incorporates human and AI search results. Drawing upon theory and practice, we will share insights and design approaches embedded within Digital Literacy: Screen, Web and New Media and Future Ideas: Information literacy and the Internet. This paper will assist educators to navigate rising AI use and provide guidance in designing university assessments which respond to this context.

Through critical reflection and invited presentations on artificial intelligence and authentic assessment at university, we have identified effective approaches to introduce students to application of AI and related ethical issues. These approaches include encouraging students to understand the place of human strengths in the broader context of AI, building knowledge of human creativity and AI limitations (Cropley & Cropley, 2023). Our praxis is guided by critical AI literacy, which explores how, whether and when to use AI tools, alongside awareness of wider social implications, including ethical dimensions (Velander et al., 2024). Students are encouraged to discuss AI applications with teaching staff, undertake explorations of truthfulness and bias, and recognise AI limits, such as analytical ability. Students are guided toward transparent use of AI at university, through explicit statements of acceptable and unacceptable use for each assessment, alongside indication of where academics have changed assessments to minimise AI vulnerability. We have also developed assessment which creates some 'Friction' in the research process, wherein 'a small amount of effort can be what allows the users to have more control and a possibility to learn' (Shah & Bender, 2024, p. 12). Through these approaches, students engage with AI in meaningful ways and are better able to determine what is fit for purpose.

Across these courses, student learning is shaped through emerging technologies which embed innovative and inclusive pedagogies. Students connect via Discord and cloud-based technologies, while learning analytics is used for teamwork and personalisation. Assessments are designed to be purposeful and empowering, informed by the ADEPT Framework for enabling pedagogy, which encourages accessible, dialogic, empowering, purposeful and transformative learning (Stokes, 2023). Universal Design for Learning (CAST, 2018) is embraced as a principle and used to shape inclusive teaching environments and create multimodal assessments with elements of choice. The inclusion of authentic assessment with aspects of personalisation reduces both the relevance and temptation to use AI in ways which may breach academic integrity (Mulder, Baik, & Ryan, 2023). We will provide specific examples of formative and summative assessments, which shape student knowledge and provide opportunities to demonstrate course learning outcomes. Through this discussion, we will further explore the tension between embedding 21st Century skills which focus on human capabilities, and guidance in embedding transparent, critical and ethical use of AI to enhance learning.

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Generative Artificial Intelligence: Integrating Platforms and Activities for Student Use

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ABSTRACT

Generative Artificial Intelligence (GenAI), continues to be a "race against the machine" for higher education, requiring rapid management of digital disruption, transition and pivoting of strategies (Shackter & Karlsson, 2023). The major concerns around GenAI in higher education have been around decreasing academic competency (Ipek et al., 2023), as well as Academic Integrity (AcAI) (Dawson, 2021), and safeguarding the assessment procedures and systems that are used has part of contemporary higher education.

In creative disciplines, problematic use of GenAI has been less detectable, likely due to the irrelevance of tools such as Turnitin in assessing creative, non-text-based outputs. However, as GenAI tools improve and are increasingly integrated into key creative software, their use is almost unavoidable within Digital Media and Communications courses.

In modern higher education online and particularly in Digital Media, students are encouraged to become proficient in creative platforms and tools. In the case of Web Design, students use industry-standard platforms such as WordPress, but are also required to research, review and experiment with third-party themes, builders and plugins. This skill development is relevant to professional practice, in terms of achieving client goals and strategy, efficiency in executing multiple projects and workflows.

We are using action research to explore the direct use of GenAI in specific activities in two courses. These include the *Adobe Photoshop Generative Fill Tool* in *Digital Graphics and Imaging*, and the *Kubio Builder* for *Web Design*. Students are asked to use these tools as part of their project assignments, and to reflect on the GenAI outcomes in terms of quality, ethics, efficiency, academic integrity, and copyright - as they relate to professional practice. They are also asked to complete a short online survey using Mentimeter - to quantify responses on these metrics.

Our findings support the idea that students feel empowered by using GenAI, are aware of the industry-ready skills that include its use, and are able to critically examine the quality of resulting outputs.

In the next phase of our research we will expand to other courses, this developing a framework for human-GenAI collaboration, emphasizing transparency, accountability, and inclusivity (Hao et al., 2024).

This research also has implications for expanding education on digital media platforms, and increasing student readiness for professional practice. We see that it also has potential to deter students from inappropriate use of GenAI.

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SESSION ABSTRACT

Improving scholarship of learning and teaching, through peer feedback in authentic assessments.

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ABSTRACT

In education, 'feedback' refers to a compilation of post-response information that communicates to the learner about their actual performance. Online learning management systems enable higher education educators to design and implement bespoke peer feedback activities aimed at progressively strengthening student reflective practice and metacognitive skills to enhance educational quality. One such online peer feedback tool, Feedback Fruits, has been reported as user-friendly by both educators and students. It delivers anonymous and audited peer-to-peer communication and lowers the quantity of peer feedback required for student learning uplift (Nicol, 2014; van Popta et al., 2017; Schillings et al., 2020).

Using Feedback Fruits, we conducted an initial evaluation of the acceptability and impact of peer feedback on group interaction and assessment quality (Emery et al., 2024). Briefly, 3rd year undergraduate medical science students provided peer-to-peer and group-to-group feedback during draft and final stages of a research project and poster presentation in an elective topic (MDSC3100). Using two-sided paired t-tests (draft vs final), peer-to-peer feedback (n=51) significantly ($p<0.05$) improved the mean evaluation scores for sharing of information (3.53 vs 3.73), discussion skills (3.44 vs 3.68), and task completion (3.68 vs 3.83). Similarly, group-to-group feedback (n=11) significantly ($p<0.05$) improved the mean evaluation scores for topic coverage (4.15 vs 4.69), poster formatting (3.95 vs. 4.58) and referencing (2.96 vs 4.53). Post assessment, the majority (90.9%) of students ranked the value of feedback received as medium or high.

The inclusion of the same topic (MDSC3100) as a 2nd year core unit within the Bachelor of Clinical Science in conjunction with the 3rd year Bachelor of Medical Science elective, has enabled the study to be replicated in 2024 with a 2-fold larger (n=117) student cohort of greater diversity (HREC 6549-7). The aim of the subsequent sub-study is to verify that online peer feedback improves student engagement, group interaction and topic assessment outcomes within the 2024 student cohort. More broadly, the findings of both studies aim to provide an evidence-based, best-practice formative feedback learning strategy for student performance uplift, improved student connection and inclusive community of practice.

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SESSION ABSTRACT

Case studies and perspectives on the collaboration of interdisciplinary education-focused academics to foster shared practice, skill development, and Scholarship of Teaching and Learning (SoTL).

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ABSTRACT

In Australia, the number of education-focused academics is growing in higher education (Godbold et al 2023). At Flinders University, currently, 32.2% of the workforce has education-focused (Teaching Specialist -TS) roles. The upskilling of teaching academics is critical to achieving quality learning and teaching outcomes (Godbold et al, 2023). This presentation focuses on three case studies, including colleagues' perspectives, where teaching academics from diverse disciplines have been supported to collaborate, share best practice, develop their scholarship of teaching and learning (SoTL) and stretch to the next level of excellence in learning and teaching.

Case study 1 – Best practice sharing

Teaching academics share practice in learning and teaching with academics across disciplines. Inspired by Wegner's work on the importance of communities of practice (CoP) in cultivating a TS-CoP as a collaborative environment where educators can share best practices, engage in continuous learning, and refine their teaching strategies (Wenger, 1998). They are critical in the development of support and mentorship, allowing peers to develop skills in SoTL and reducing isolation, creating a sense of belonging and community amongst teaching academics.

Academics also share best practice through an informal workshop with time scheduled for discussion and collaboration. Stakeholders from outside the university are invited to share their expertise within the workshop. An annual Celebration of Learning and Teaching event is an opportunity to share SoTL delivered at conferences throughout the year.

Case study 2 – Mentoring to support scholarship

Exploration of a mentoring model utilised to support teaching academics to develop scholarship goals and engage in collaborative SoTL. The model is underpinned by Bandura's self-efficacy theory for an academic context (Artino, 2012). Teaching academic perspectives in relation to experiences of designing, implementing and disseminating targeted projects in a health professional discipline, will be discussed.

Case study 3 – Stretching to excellence through Accountability Groups

This case study discusses experiences and perspectives of colleagues from different disciplines supporting each other in stretching to excellence through developing senior fellowship submissions for Advance HE through institutionally sponsored Accountability Groups. This commitment not only drives our own growth but also significantly enhances educational outcomes for our students, through reflection on our scholarly approaches.

Key learnings from these four case studies and perspectives from colleagues demonstrate how interdisciplinary SoTL can foster a culture of best practice sharing, collaboration, upskilling and mentoring.

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SESSION ABSTRACT

Academic Integrity and Academics' demonstrating 'trustworthiness': Towards walking the walk in the Age of Artificial Intelligence

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ABSTRACT

World-wide academics have condemned inappropriate student use of generative artificial intelligence (GenAI) and scrambled to find ways to detect breaches. Conversely, academia has been quick to embrace the use of GenAI in lightening our own load in developing teaching resources and/or even assessment of student work without necessarily fully exploring the ethical elements of allowing access to student work and data. In this paper we argue along with Sarah Eaton (2023) that "there can be no integrity without trust" and "there can be no trust without trustworthiness, meaning one must be worthy of trust". If we expect students to demonstrate academic integrity, we need to do more than 'talk the talk'. We need "to explicitly and intentionally" teach academic integrity through "demonstration, explanation and practice" (Gray and Jordan, 2021, p.23) and highlight for students the academic integrity requirements of each task. And even more importantly, we need to 'walk the walk' of academic integrity and ethical behaviours in our own teaching, research, and service.

This paper reports on two research projects each involving virtual institutional ethnography (Shumar & Maddison, 2013) and focussing on academic integrity: one researching three Islamic Religious Universities (IRUs) in Indonesia and the other the response of one Australian university to the launch of ChatGPT and easily accessible GenAI. Policy documents, academic course, and orientation documentation along with web responses and interviews with key stakeholders were all drawn upon to explore the evolving culture related to academic integrity at the institutions. Within the IRU context, Akbar collaborated with key stakeholders to evolve his STAR framework which builds on the seminal work of Bretag and Mahmud (2016), proposing that in the policy and practices of academic integrity at IRHE institutions, the development of the integrity of the institutions (institutional AI) and the integrity of the members of the universities (Individual AI) be viewed as integral and inseparable. This resulted in an aligning of academic integrity values with the religious values of the institution and explicitly highlighting these to staff and students. In addition, the academics modelled these values to their students and reflected on their own 'trustworthiness' focussing on the purpose of learning and teaching in an ethical university.

In the Australian context, the publicly available policy documents, social media posts and comments of academics and students were collected over a period of 18 months. During this time, a Working Party on Digital Literacies and GenAI drawn from academics and professional staff across the university iteratively developed resources and co-designed these alongside students. Our analysis revealed shifts over time in the attitudes of academics towards a more nuanced understanding of the relationship between academic integrity and GenAI and increased understanding and 'trust' of their students. There was also an increased awareness of the need to model ethical use of GenAI to their students.

This research contributes some insights into how through a critical awareness of our own academic integrity and co-design with all stakeholders, academics can demonstrate trustworthiness in relation to academic integrity in an age of rapid technological change.

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SESSION ABSTRACT

Calibrating metacognitive monitoring through regular reflective writing and self-regulated learning strategies: A case study of an undergraduate education

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ABSTRACT

Students face significant challenges transitioning from secondary to higher education, placing a greater emphasis on learner agency and autonomy [1, 2]. Successful transitions depend on strong self-regulated learning (SRL) skills, with metacognitive monitoring being a key component. Metacognitive monitoring involves students actively tracking their thoughts and actions during study sessions [3, 4]. By reflecting on their learning process, students can make informed decisions about their progress and adjust their strategies as needed [5, 6, 7]. While research to date has predominantly focused on various aspects of metacognition, such as awareness, regulation, evaluation, or metacognitive skills [8, 9], there is limited research on calibrating metacognitive monitoring using regular reflective writing practices.

This study aims to address this gap by employing a case study methodology to examine undergraduate engineering and pre-service early childhood education students. It explores the relationship between regular reflective writing, metacognitive monitoring, and SRL strategies by integrating statistical and content analysis using Large Language Models (LLMs). The results indicate that the practice of reflective writing improved metacognitive monitoring in engineering students. In contrast, no significant change was observed for the early childhood education cohort despite changes in the patterns of metacognitive monitoring occurring in both cohorts. The study also identified that strategies such as goal setting and planning, environmental structuring, and seeking social assistance influenced individual changes in metacognitive monitoring across both undergraduate programs.

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SESSION ABSTRACT

Simulated Clinical Competency testing in computed tomography (CT) skills: An innovative approach to ensure work-ready graduates

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ABSTRACT

In late 2019, the Australian Technology Network of Tertiary Institutions met and agreed that authentic assessments – that is, those that are realistic and related to the future work of students – are core to enabling students to become the work-ready graduates that Australia needs.[1] This project supports the recognition of and movement towards more authentic forms of assessment, instilling graduate qualities and job-ready skills within our students.

Radiation therapy students in their fourth-year work towards achieving competency in performing CT scans for radiotherapy treatment planning in their final 6 months of training. This is traditionally achieved on clinical placement in radiation therapy departments. Prior to this, students participate in these procedures but are not assessed for competence whilst they are developing skills. Last year in a pre-clinical workshop all students completed a simulated competency test prior to their placement. This test was conducted using CT simulation software, authentic clinical equipment, documentation and patient actors.[2] All elements of acquiring a radiation therapy planning CT were assessed by this method. The competency test was conducted before a six week clinical placement and the outcome was that all students passed this simulated clinical assessment. This gave students prior experience to build on, and confidence in gaining competence clinically on placement.

This presentation summarises the elements of the competency assessment that were tested in a simulated environment, describes the characteristics of the assessment that are deemed authentic, and provides examples of student evaluation.

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Interrogating academic readings using ChatPDF: A qualitative case study of international student preparation for participation in postgraduate seminars

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ABSTRACT

International students with experience as English language teachers in their respective countries who enter a Master of Education (TESOL) program at an Australian university have found it challenging to adequately analyse and synthesise academic readings in English for postgraduate seminar discussions. Students in this study came from countries such as Kenya, Nepal, Bhutan, Timor Leste, Vietnam, China and India and teach in different sectors, at different levels and for different purposes with specific policy contexts and tailored teaching resources. Typically, the course readings present advanced theoretical and conceptual knowledge which students most likely have not encountered previously. The requirement for them is to apply their understandings of the readings in seminar discussions concerning the educational settings in which they teach the English language. Online resource supports are provided to students who are required to prepare at least eight readings per week across four courses studied concurrently in their program over four semesters.

In this small-scale qualitative study, ChatPDF was introduced to students to create efficiencies in preparing the readings for active engagement in the weekly seminars. The process involved the students dropping articles onto the ChatPDF website for an analysis of the key topics and points from the article. Discussion questions are provided by the lecturer on a PowerPoint slide which require participants to apply concepts from the article to their own teaching circumstance which can be compared in and across groups. Participants from two classes, one first year and one second year, provided text-based responses to a 10-question survey on their use of ChatPDF to prepare for seminars and an associated assignment over an 8-week period of one semester. The collective findings from a thematic content analysis of the text-based survey responses revealed that students perceived an improvement in their understandings of the readings in a shorter period of time and were able to use the artificial intelligence generated (GenAI) output to inform their seminar discussions. Students also reported some of the negative aspects of using such tools. The lecturers of the classes observed that students were actively engaged in group discussions and were enabled by the use of the tool to report discussion outcomes that were informed by relevant theory and concepts from the readings.

SESSION ABSTRACT

Evaluating student and teacher perspectives of blended learning personalisation supported by artificial intelligence

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ABSTRACT

The rise of online technology has expanded the capabilities of universities globally, offering learners increased flexibility and personalisation in their studies (Dunn & Kennedy, 2019). This transformation has integrated a blend of online and classroom-based elements into contemporary curricula however, teaching approaches often remain bound to standardised 'one-size-fits-all' methods that fail to address individual learner needs (Fariani et al., 2022). The advent of artificial intelligence (AI), particularly through large language models and deep learning, has opened new possibilities for customising educational experiences, scaling personalised learning, and predicting student outcomes using data-driven approaches (Bhutoria, 2022). To fully harness these opportunities, it is essential to understand the demographic and dispositional characteristics of both students and teachers that drive learner engagement, as well as the curriculum and technology factors that enhance the learning experience.

In this study, we described and evaluated the characteristics of students and teachers to explore how blended learning can be personalised to encourage student engagement, especially the role that AI could play. This was a mixed methods approach, where learner characteristics were identified using a survey instrument provided to a self-nominated group of students (n=122) at a leading Australian research-focused University. A companion survey was undertaken by teachers (n=64) across the Australian Go8 Universities, to collect the perspectives of those working with the students. Both surveys were followed up by semi-structured interviews. The findings reveal that student characteristics, while influential in shaping feedback and supporting learning, were not significantly linked to the personalisation of learning materials. In contrast, teacher characteristics were instrumental in determining the types of effective feedback and how learning analytics were applied to create personalised learning experiences. Based on these insights, we offer recommendations on the effective use of AI tools to personalise blended learning in higher education.

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SESSION ABSTRACT

A Pedagogy for Embedding Artificial Intelligence and Technology across CBGL MBA Programs for Future Workforce Preparedness

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ABSTRACT

Artificial intelligence is rapidly transforming education and technology (Zhai et al., 2021). However, the education industry—especially business education outside computer science and engineering—faces significant challenges in integrating AI into curricula. Addressing these challenges is crucial for training an AI-ready workforce, as companies will require employees who understand AI concepts to manage and collaborate with AI implementation agents.

Due to the scarcity of curriculum development frameworks and pedagogical resources as well as the disciplinary associations with regulatory and accreditation frameworks such as AACSB and TEQSA in Australia, business schools are facing the challenge of how to effectively incorporate AI into curriculum design to enable business students to remain relevant in AI era (Xu & Babaian, 2021). Thus, Business schools have adopted various approaches to integrate AI into their curricula. These range from relying on case studies, which may have limited impact on developing AI skills, to introducing programming and technical skills, which can sometimes be superficial. However, there is potential for improvement around applying best practices in designing a curriculum that adequately prepares business students with the AI skills needed to thrive in the complex future of work (Chen et al., 2021). There has also been calls for pedagogical evolutions to incorporate AI-driven competencies that can support the current and emerging demands in the industry (Allil, 2024).

The purpose of the current study is to develop a framework for integrating AI in business programs informed by current research and job market insights for best practice in curriculum design. To this end, we are utilising a 3-phased approach which is discussed in the method section below.

To address this research problem, we adopted a three-phase approach: Phase I (current study): a bibliometric analysis, Phase II: a systematic literature review (research in progress), and Phase III: an analysis of changes in job listings on LinkedIn for various business roles over the past three years by applying natural language processing models to extract insights.

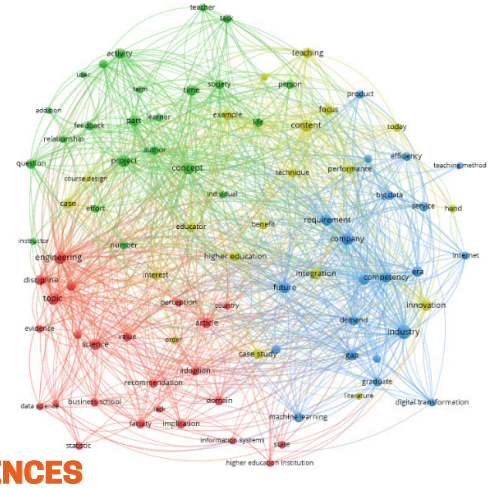
The bibliometric analysis, shown in Figure 1, using the terms “curriculum,” “business,” and “artificial intelligence” in the Scopus database, identified three main themes: Industry, Concept, and Engineering. The Industry theme focuses on trends like digital transformation and future requirements for employability of future business graduates, reflecting industry needs.

The Concept theme centres on course design, assessment, and learning, and how to develop curriculum that is aligned with the current trends in the discipline as well as the needs of the job market.

The Engineering theme highlights the need to incorporate technical aspects of working with artificial intelligence in business practices and how those skills are incorporated in business curricula to produce AI-proficient graduates.

The ongoing second phase (systematic literature review) involves a deeper review of each theme, with the final phase comparing these insights to recent job postings and using topic modelling to identify research gaps.

As such, in this presentation, we present the results of our research along with our proposed research-informed plan to incorporate AI in the MBA programs at Flinders University by taking into consideration key elements of the programs such as learning and teaching, curriculum development and design, assessment strategies, learning outcomes, research-teaching nexus, graduate competencies, work-integrated learning, and industry projects.



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SESSION ABSTRACT

The future of healthcare- Simulation-based learning environments and preparing future midwives for effective rapport building in telehealth settings.

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ABSTRACT

Prior to the COVID-19 pandemic, the inclusion of telehealth services was often underutilised and discouraged (Rivet et al., 2023). Since the Australian Government's support of the service in 2020, over 100 million telehealth services have been delivered to approximately 17 million Australians (Department of Health and Aged Care, 2022). Telehealth has therefore become an integral and key system to deliver healthcare throughout Australia (Rivet et al., 2023), with potential for improved accessibility, time efficiency, cost effectiveness and an increase in accessibility to resources (Berrier & Hellier., 2022). In response, the Australian Nursing and Midwifery Accreditation Council introduced the requirement that digital health and emerging technologies be included in their curricula.

The building of trust and rapport are key to the quality of the woman-midwife relationship (Cooper et al., 2020; English et al., 2023), and are an integral part of the midwifery undergraduate curriculum. The literature argues, however, that providing clinical care over telehealth platforms involves an advanced communication skill set (Mulcare et al., 2020, Garber et al., 2023) and additional competencies in digital and online technologies.

With the rise of generative AI, it's essential to reassess our teaching and assessment practices to ensure they promote authentic learning; something that SBLE has consistently excelled at providing (Levin. et al., 2023). Simulation-based learning environments (SBLE) are effective in developing face-to-face clinical communication and rapport-building skills (Hill. et al., 2022), however, the added layer of complexity in integrating telehealth skills can be challenging for educators who are not necessarily specifically trained in telehealth delivery (Routledge et al., 2020).

This pilot study explored the perceptions and experiences of three educators and seven graduates who participated in a simulation-based learning curriculum for undergraduate midwifery students in a South Australian university. Using a qualitative descriptive methodology, data was collected during semi-structured interviews which were centred around four main themes:

- Understandings of what constitutes telehealth
- Teaching and learning of telehealth skills in a simulated environment
- Translatability of skills and concepts in the clinical context, and
- Educator training and standardisation.

Reflexive thematic analysis showed that while the teaching of communication skills in SBLE is well-established in undergraduate midwifery education, the midwifery graduates experienced significant different experiences in the telehealth training which affected their preparedness and confidence to translate learning into practice. Contributing factors were diverse definitions of what constitutes telehealth, technical issues and the lack of specific training of educators in this area. This affected the quality and scope of the scenarios, and the specificities of rapport-building in telehealth consultations were not consistently or explicitly addressed. Positive incidental skills development in managing technology and general online communication was reported by the students who had joined the simulation training online from rural locations, but not in rapport-building. Finally, a number of graduates reported the lack of opportunities to practice telehealth skills while on placement.

Key recommendations are specific training in telehealth skills for simulation educators, common definitions of what constitutes telehealth in midwifery care, standardisation of meaningful and realistic telehealth scenarios, and the inclusion of specific communication skills in relation to rapport-building in online and digital environments. This needs to be extended to clinical placements so students have opportunities to hone their skills and receive feedback in the clinical context.

SESSION ABSTRACT

From Manual to Automated: The Efficiency of Gen-AI in Course Development

Laura Airey, Simon Nagy, Richard McInnes
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ABSTRACT

Artificial Intelligence has long promised to revolutionise higher education, but before 2022 there were comparatively few 'significant advancements' regarding teaching and learning (Tahiru, 2021). In late 2022, gen-AIs utilising user prompts to create artefacts (e.g., Google Bard, DALL-E, and ChatGPT) were massified (Crawford, et al., 2023), with this massification of free, publicly available tools leading to gen-AI's incorporation across higher education (e.g., Sok & Heng, 2023). This incorporation has presented potential gains in efficiency (Halaweh, 2023), such as by automating aspects of course development, but has also raised questions about the potential impacts on the practice of academic and third-space staff.

Addressing the conference theme of "Innovative approaches in teaching and learning", the proposed presentation uses a case study approach to explore the changing roles and dynamics when gen-AI is incorporated as a partner to automate elements of the course development process. As experienced learning designers, we gathered data through sixteen months of community of practice meetings using a constructivist research approach to seed organic discussions, with these focusing on our use of gen-AI in designing online courses at an Australian university and our experiences with the capability of gen-AI to both innovate and unbundle (White et al., 2020) aspects of our roles. The outcomes from these discussions form the data set and the focal point for this presentation.

This presentation explores the possibilities and pitfalls of AI as a partner in automating course development. We focus on the potential incongruity of two possible futures--one where AI automations enable efficiencies in the course development that supports the development of high-quality courses while enabling academic capability-building, and another where these AI-enabled efficiencies act as an unbundling agent, divesting academics of agency and learning and teaching capability. Through unpacking the coalescing of these possible futures, this presentation will propose how the human-in-the-loop perspective for machine learning (Mosqueira-Rey et al., 2023) can be reimagined to understand how human and machine actors' interactions are identified and categorised as course development tasks are automated. In this way, automating course development tasks can be institutionally profitable and sustainable while also enabling academic capability-building in teaching and learning.

SESSION ABSTRACT

A simple approach to introduce first-year students to appropriate and ethical use of Generative Artificial Intelligence tools in the health sciences.

Matthew Ankers, Tori Llewelyn, Louisa Matwiejczyk
Flinders University

ABSTRACT

The emergence of easy-to-access (and use) generative artificial intelligence (genAI) technologies has had a disruptive and transformative effect on the tertiary academic landscape, leading to an urgent need to develop student literacy regarding genAI technology. Moreover, while media has placed considerable focus on negative issues related to the technology including factual errors (e.g., propensity to "hallucinate" content), ethical concerns (e.g., assessment impacts and academic integrity issues), and biases inherent in output (data used to train AI scraped from content representing dominant worldviews), the technology has considerable potential to assist students with their learning. Indeed, despite the inherent limitations of current genAI technologies, genAI has the potential to revolutionise student learning, by assisting with:

1. Comprehension of challenging concepts
2. Identification of academic sources to inform their studies
3. Editorial feedback on student writing (among other things).

Given the rapidly increasing availability and integration of genAI tools into established "student help" sites and tools such as Grammarly, we realised the importance of ensuring our commencing students were aware of the benefits and limitations of these tools. Hence, we developed a lesson plan to introduce first-year, undergraduate students to genAI technology and the ethical considerations around its use. In semester 1 of 2024, students enrolled in a core level one research and study skills topic, completed a workshop focussing on appropriate use and limitations of genAI technologies. The lesson prework required students to read and summarise a short online article. In class, students were encouraged to feed the prework article into a genAI tool, and have the tool summarise its content. Students then compared the genAI summary to their own, and analysed the differences, while also observing for hallucinations and potential biases in the genAI version. The lesson ended with a discussion regarding appropriate use of AI, including how students should, and should not, use it to aid their studies.

At the end of the session, students were asked to complete a survey about their learning and experiences. In total, 26 students responded to the survey, with the majority of the respondents describing the lesson (e.g., learning to use GenAI and appropriate use) as moderately to very helpful. Interestingly, 5 of the 26 respondents noted having never previously engaged with the technology, while many requested further guidance on appropriate and inappropriate uses of genAI technology, in relation to their studies. The lesson helped students gain literacy in this emerging technology by encouraging active engagement with the genAI tool and through critique of its content, while also providing them with an understanding of the ethical considerations around genAI use. Based on student feedback, a logical next step would be to provide further in-class examples of appropriate and inappropriate use of these technologies, and to integrate appropriate use of genAI technology into the various steps across assessment items to encourage authentic, appropriate and ethical use of these tools.

SESSION ABSTRACT

Course-Tailored AI in Education: Integration of Context-Free Grammar for Dynamic Learning and Feedback Adaptation

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ABSTRACT

The advent of artificial intelligence (AI) has changed several domains, including the arts, music, medicine, education, and cybersecurity. Current artificial intelligence in education, known as Intelligent Tutoring Systems (ITSs), often uses fixed rules or constraints to guide students and provide feedback [1]. Although these systems are effective within certain frameworks, they often struggle to incorporate innovative teaching methods or adapt to unforeseen student interactions. This study introduces a new approach to using AI in education, aiming to overcome the limitations of current ITSs. We propose using Context-Free Grammar (CFG) with Earley's parsing techniques to help AI better understand and interpret educational content and student interactions [2]. Our approach focuses on developing AI-assisted learning experiences tailored to specific educational contexts where personalized learning is most needed, such as cybersecurity, big data analysis, and cloud computing. This approach highlights cohorts of students in technical fields who would benefit the most from such adaptable and flexible learning tools, enabling them to address complex challenges with cutting-edge, data-driven educational resources. This method combines advanced language understanding techniques with a learning model inspired by how teachers guide students.

The model is designed to continuously improve through a process similar to how a teacher trains a student. It has three components: a knowledge base that understands and organises educational content, a way to collect and learn from student feedback, and the ability to create new, tailored learning materials. It starts with initial knowledge from educators and then learns from student interactions to refine its understanding and capabilities. The model can apply information from one learning scenario to create content for different environments. For example, it can adapt a lesson designed for one computer operating system to work on another. We tested our system within the cybersecurity education domain to analyze, learn, and identify new or existing vulnerabilities in the Azure cloud environment. It successfully adapted learning materials initially designed for one type of computer system to work on different systems, demonstrating its ability to create and adapt course materials for different computer environments with reduced human input [3]. This approach enhances the personalization and adaptability of AI-assisted education, tailoring it to various subjects and teaching environments. Currently, our study focuses on the development of the system. In the future, we plan to test this system with different types of courses and in various educational settings, using student experience data to further demonstrate its effectiveness and versatility.

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SESSION ABSTRACT

Using Digital Storytelling as a Pedagogical Approach to Enhance Engagement, Knowledge Acquisition and Employability Skills in Online and Hybrid Teaching Modes.

Gosia Ludwichowska-Alluigi, Monica Orlovic
University of South Australia

ABSTRACT

This paper explores digital storytelling as a pedagogical approach to enhance the learning experience of first-year undergraduate marketing students, focusing on developing problem-solving skills. Part of a larger program-level project, the study evaluates whether this innovative technique engages students in fully online and hybrid teaching modes.

Higher education has faced criticism for inadequately preparing graduates for industry (Bhatti et al., 2022). Kurtzke & Setkute (2021) highlight a skill gap in problem-solving among graduates. With artificial intelligence (AI) transforming workplaces, 82% of leaders say employees will need skills that AI cannot emulate, like critical thinking and problem-solving (Bughin et al., 2018; Microsoft Work Lab, 2023). Higher education must adapt by collaborating with industry to use innovative experiential methods to develop students' employability skills in the classroom (Yeoh, 2018). With the acceleration of online learning, interpersonal relationships and instructor presence diminish, creating new challenges for educators as students must self-regulate their learning. Higher attrition rates in online courses underscore the need for engaging and relevant instructional approaches to maintain student motivation and reduce dropout rates (Wang & Zhao, 2023).

We incorporated storytelling by developing seven 2D animated videos aligned to the curriculum of a first-year course, Consumer Behaviour, delivered fully online and in traditional hybrid mode. Video scripts were reviewed by academic peers and an industry practitioner to ensure relevance and complexity of the scenarios. The videos depict a student joining a Graduate Program in a fictitious organisation and working within a Consumer Insights team to simulate real-world marketing practice and decision-making. The course spans ten weeks, with storytelling interwoven into four weeks of material, via videos, narratives, learning activities and summative assessments.

Our research aims to address whether digital storytelling improves problem-solving competencies, facilitates knowledge acquisition and improves students' performance. To analyse the impact of digital storytelling we use a within-subject research design. The evaluation will cover six iterations of the course, between 2024 and 2026, with 900 students. Data on student engagement will be gathered using Moodle's Learning Analytics, summative assessments linked to the stories to assess problem-solving, and through student self-evaluations directly after watching videos. Findings will be presented at the conference, however early results show an enthusiastic uptake from students. Completed weekly feedback shows that 100% of respondents want to continue learning with this approach, quoting it as "a great strategy to motivate students and introduce them to working in the industry" and "it has helped me visualise and conceptualise the theory, which makes me excited to keep learning".

We anticipate making significant contributions to literature and teaching by demonstrating the pedagogical benefits of digital storytelling in marketing education—a method that, despite its known advantages (Suwardy et al., 2013), is not widely used in teaching Business students. Typically employed as an assessment technique (Spanjaard et al., 2022), digital storytelling engages students in real-life marketing scenarios, enhancing employability and workforce readiness. This approach connects and deepens understanding of course content and its real-world applications, informing future curriculum design and fostering academia-industry collaboration.

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SESSION ABSTRACT

From Critical Theory to critical practice: gen-AI integration in higher education

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ABSTRACT

As universities grapple with the rapid integration of generative artificial intelligence (gen-AI) technologies, examining how these tools might inadvertently reinforce existing power structures and marginalise diverse voices is critical. The design of curricula is a pivotal process that shapes the knowledge and perspectives imparted to students (Freire, 2005). Yet, the very gen-AI tools we have adopted in higher education to co-design curricula (Nagy, 2023) are built on allegedly stolen data (Cerullo, 2023) that often when traced back to its origins is that of a white, Anglicised, male (Corple & Linabary, 2020). In this presentation, we advocate for the development of individuals' critical consciousness regarding gen-AI and their role in deconstructing hegemonic colonial influences on knowledge systems, and recognising, valuing, and integrating diverse ways of knowing and being that have been historically marginalised (Akoleowo, 2021).

Addressing the conference theme of "Theories supporting the practical use of Artificial Intelligence", we have chosen to problematise the adoption of generative artificial intelligence for curriculum design in higher education. Overarchingly, research into educational technologies has focused on the artefacts, the tools, as the site of the research, rather than the problems that are faced, both within the classroom when dealing with issues such as student engagement, but especially so when addressing major problems confronting education such as climate change, and racism (Reeves & Lin, 2020). This has been particularly evident with the 'emergence' of gen-AI tools such as ChatGPT, where 'research' is published en-masse about the new tools and what they can do (Hodges & Kirschner, 2024). This approach fundamentally ignores the human-centric problems surrounding the massification and adoption of gen-AI. Through a synthesis of Critical Pedagogy (Freire, 2005), a sub-branch of Critical Theory, as a theoretical framework and research literature, we examine the potential impact of gen-AI on higher education curriculum design, focusing on two questions; how does the integration of gen-AI into higher education influence the design of curricula in ways that might reintroduce or reinforce existing hegemonic narratives and power structures? and, what strategies can educators and policymakers employ to resist recolonising curriculum design through gen-AI, instead ensuring that its integration supports and amplifies diverse voices? For conference participants, we aim to show how theory can be applied to practice to inform the decisions they make for using gen-AI in their courses and supporting students in using gen-AI. We will share practical strategies for educators and policymakers to resist the reinforcement of dominant hegemonic narratives and ideals within educational contexts both at a high level and in their own practice.

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SESSION ABSTRACT

StudyBuddy: An Agentic AI Teaching Assistant for Enhanced Computer Science Education

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ABSTRACT

The rapid advancement of generative AI technologies, particularly Large Language Models (LLMs), has created both opportunities and challenges in education (Abd-Alrazaq et al., 2023; Kasneci et al., 2023, Meyer et al., 2023, Yan et al., 2023). There is a growing trend to leverage LLMs for various educational purposes. Students increasingly use tools like ChatGPT and Gemini for assignments and projects, while educators explore ways to integrate such technologies into their teaching methods (Ahmed et al., 2024; Gimpel et al., 2023). Coding-focused LLMs, on the other hand, have shown impressive capabilities in code generation, debugging, and explaining complex programming concepts, offering potential applications in Computer Science (CS) education (Wang et al., 2024; Pirzado et al., 2024).

However, LLMs have limitations such as knowledge cutoffs, reasoning deficiencies, hallucinations, and potential biases, which can lead to suboptimal learning experiences. The integration of AI tools in education also raises concerns about academic integrity and the development of genuine problem-solving skills (Shen et al., 2023; Yigci et al., 2024). There is a need for an AI-powered teaching assistant that can overcome these limitations while providing adaptive, effective support for both students and educators.

This research aims to develop an AI system that can:

- Improve student learning outcomes in core CS courses.
- Enhance the efficiency and effectiveness of CS teaching by automating routine tasks, providing personalized learning experiences, and offering real-time feedback.
- Promote critical thinking and problem-solving skills by emphasizing guidance rather than immediate solutions.
- Implement robust mechanisms for ensuring academic integrity within AI-assisted learning environments.

To address these objectives, we introduce StudyBuddy, an innovative agentic AI system designed to augment and enhance CS teaching and learning. StudyBuddy incorporates advanced AI techniques to address the limitations of traditional LLMs and create a more robust, reliable, and educationally effective tool. By adopting a student-centered learning approach (Wright, 2011; Froyd & Simpson, 2008), StudyBuddy tailors educational experiences to individual student needs, promoting active engagement and fostering a sense of ownership over their learning process.

StudyBuddy comprises specialized agents and features, each designed to address specific aspects of the learning and teaching process.

The development and implementation of StudyBuddy follow a Design-Based Research (DBR) approach, which allows for systematic yet flexible methodology aimed at improving educational practices through iterative analysis, design, development, and implementation (Johnson et al., 2017).

The effectiveness of StudyBuddy has been evaluated using a mixed-methods approach. Preliminary results show significant improvements in student performance, engagement, and confidence, as well as increased efficiency in teaching processes. Quantitative data indicate reductions in time spent by instructors on routine tasks. Qualitative feedback from students and educators has been remarkably positive, with most reporting enhanced teaching or learning experiences and a stronger emphasis on original work and ethical academic practices.

StudyBuddy represents a significant advancement in AI-assisted education, particularly in the field of Computer Science. By leveraging agentic capabilities, it overcomes many of the limitations associated with traditional LLMs, leading to improved learning outcomes and teaching efficiency. This research supports the integration of AI in education while addressing concerns related to academic integrity and skill development. By adopting a student-centered learning approach, StudyBuddy tailors educational experiences to individual student needs, promoting active engagement and fostering a sense of ownership over their learning process. Ongoing research will further validate and expand these findings with larger cohorts of students and educators, contributing to the growing body of evidence supporting the effective use of AI in education.

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SESSION ABSTRACT

Emotions Matter: Innovative Approaches to Student Support and Teacher Roles in Asynchronous Online Learning Environments

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ABSTRACT

Students' emotional experiences in online learning are deeply intertwined with their engagement with learning, persistence and goal achievement (Garrison, 2016; Pekrun et al., 2017; Redmond et al., 2018). However, a critical challenge emerges in online courses as they are designed for asynchronous teaching and learning, leaving limited opportunities for teachers to support online students' emotions in the learning process. This raises questions for teachers on how to recognise and support students' emotions in online courses in an effort to enhance learning experiences and outcomes.

As higher education institutions continue to expand their online offerings (Guppy et al., 2022), the disconnect between the acknowledged importance of emotions in learning and the structural limitations of asynchronous online courses heightens (Croxton, 2014; Pentaraki & Burkholder, 2017). This gap not only impedes student learning experience but also contributes to higher non-completion rates in online courses (Dyment et al., 2020; Tieben, 2020; Tyng et al., 2017). This study investigates students' emotional experiences in online courses and explores pedagogical practice by utilising innovative learning resources for timely interventions.

This paper outlines findings from in-depth interviews with online students, revealing a range of emotional experiences impacting their learning process. Students report a range of emotional experiences, from isolation and frustration to pride and accomplishment. Many struggle with self-doubt, assessment anxiety, and motivation issues, particularly without the structure of physical classrooms providing additional support. Those who felt a strong personal connection with teachers reported higher motivation and engagement with their learning, highlighting the crucial role of teachers, especially in asynchronous learning environments.

Based on these insights, we implemented learning resources utilising advanced interactive learning tools and virtual classes to create immersive synchronous experiences within an asynchronous online course. The findings revealed that these resources gained significantly more attention than other course materials. Student feedback regarding the effectiveness of virtual classes and their overall experience was overwhelmingly positive, indicating a promising outlook for the integration of interactive learning resources and virtual classes to foster students' emotions in online learning environments.

Other key areas of support include offering personalised and constructive feedback, promoting a community in virtual classes, and implementing proactive support systems. Students express a strong preference for interactive learning experiences, detailed feedback, and teachers who reach out to offer assistance during periods of low engagement.

This holistic approach has the potential to improve student outcomes, increase retention rates, and prepare learners for success in an increasingly digital world (Bower, 2019; Redmond et al., 2018). As we (teachers) navigate the rapidly growing technological society and higher education, supporting online students' emotions is paramount. By redefining teacher roles in asynchronous environments and leveraging innovative technologies, we demonstrate that online courses can provide supportive, engaging and effective learning experiences.

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SESSION ABSTRACT

Scaffolding Authentic Research Projects Across Undergraduate Degrees

Jeanne Young Kirby
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ABSTRACT

Integrating authentic, self-driven research opportunities throughout undergraduate degrees provides students with a valuable learning experience that nurtures independence, confidence, and a sense of agency in their educational journey. Allowing students to choose their research topics increases engagement and enthusiasm, encouraging them to apply and further develop their problem-solving and critical-thinking skills (Petrella & Jung, 2008). Logistical constraints such as time, financial resources, and available infrastructure can challenge the implementation of these opportunities within a three-year undergraduate curriculum. This work outlines our integrated approach to embedding research opportunities throughout the Bachelor of Science curriculum in a biology discipline, ensuring a progressive scaffolding of key research skills across different years and topics, culminating in the application of increasingly sophisticated knowledge and methodologies (Linn et al., 2015).

In the first year, biology students participate in group research projects across two core courses, supported by laboratory classes. The group work, conducted outside of class, helps students build connections, gain confidence, and develop key employability skills, including communication, collaboration, and problem-solving (Cheruvelil et al., 2020; Guo et al., 2020). The first project is a research proposal where students address a gap in the literature by formulating a testable hypothesis. The second is a limited logistic research project. These projects allow students to develop skills in researching and evaluating scientific literature, scientific writing, basic data analysis, presentation, and teamwork.

In the second year, research is integrated into a biostatistics course. Students design, execute, and report on a research project relevant to their discipline. These projects are more complex, requiring individual work and increased expectations in areas such as risk assessment, ethical guidelines, and statistically appropriate study design. Teaching support is scaffolded throughout the semester, with feedback provided through both formative and summative assessments.

In the third year, students choose between conducting an individual research project under the supervision of an academic staff member or joining a student research team to tackle an industry-inspired question. The focus shifts to professionalism, with students expected to complete their work to an industry standard. They are encouraged to seek guidance through consultations with supervising staff or industry partners.

Logistical constraints, including limited time and resources, make implementing research into the curriculum challenging. These issues are addressed through coordinated scaffolding of skills across the three years, with research activities conducted as out of class work and supported by dedicated consultations during class time. This structured approach ensures that students gradually build their research capabilities, culminating in a comprehensive research experience by the third year. By integrating research opportunities progressively, students gain a solid foundation in scientific research, preparing them for professional careers or further academic pursuits.

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WORKSHOP ABSTRACT

Designing for Learning

Tim Klapdor
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ABSTRACT

The ability to create engaging learning experiences is key to the effective delivery of education. Globally, we are seeing the growth of learning design practices, which influence and enhance traditional teaching and education practices. Yet adoption is hampered by the lack of systemic practices, language and shared approaches.

This workshop will introduce an approach based on the concepts of 'learning types' and 'learning patterns' that lays the groundwork for implementing a systemic method to aid the design of learning that can be adopted across sectors, languages, technologies, and systems.

Laurillard's (2002, 2012) outlined learning types in the Conversational Framework and have been taken up in learning design through the ABC LD model (Perovic & Young, 2020) and used to analyse learning experiences (Hollinshead & Pope, 2023). These types have been adapted for our use to adjectives that expand learning beyond the teacher-learner conversation model to apply more broadly. A set of seven Learning Types have been established: Assimilative, Investigative, Formative, Discursive, Productive, Evaluative and Social. These learning types form the basis of a system used across several programs at the University of Adelaide and in various other institutions to help support their learning design efforts.

This workshop will demonstrate how these learning types can help define engaging learning experiences across a program, course, lesson, and class. They can also help design new experiences, aid diagnosis in existing circumstances, and improve current learning and teaching practices.

The workshop will also introduce the idea of 'learning patterns' based on the concept of a Pattern Language (Alexander, 1977). Learning patterns are reusable scaffolds that aid the design of a learning experience. They provide a superstructure or way of thinking that can be reused and recombined to suit different contexts and topics. During the workshop, participants will utilise these to create unique learner experiences.

The workshop will introduce a range of practices and resources that can help staff across the education sector develop learner-centred experiences specifically designed for learning.

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SESSION ABSTRACT

Navigating Ethical AI Integration in Higher Ed: Academic Insights from Torrens University Australia

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ABSTRACT

The rapid advancement of artificial intelligence (AI), particularly large language models (LLMs), has sparked significant discussions about their ethical and responsible use in higher education. Universities and educational institutions are tasked with ensuring transparency, professionalism, and ethical considerations in AI adoption (McGrath et al., 2023). However, the growing use of AI in education has raised several ethical concerns. These include unequal access to AI-powered tools, potential breaches of student data privacy, and the generation of harmful content that could negatively impact the learning experience (Airaj, 2024; Nguyen et al., 2023). While research on AI in education is booming, there remains a significant gap in understanding how to adopt such tools responsibly to foster positive learning and teaching experiences.

In this study we aimed to address this research gap by investigating how to adopt AI-powered tools in higher education responsibly and ethically. Employing a qualitative research methodology based on Interpretative Phenomenological Analysis (IPA), an ongoing study is examining the experiences and perspectives of academic leaders at Torrens University Australia regarding responsible AI adoption. Through in-depth semi-structured one-on-one interviews, the research explores academic leaders understanding of the potential and challenges of integrating responsible AI-powered tools within university settings.

Preliminary findings reveal that AI-powered tools offer substantial potential for timely and data-driven decision-making in academic processes, even on an ad hoc basis. This includes analysing student data to predict academic outcomes (e.g., identifying students at risk of failure) and providing insight into student progression. However, the findings also indicate that student's inappropriate use of AI tools poses a significant challenge for academic leaders, hindering ethical and responsible AI adoption. The research further clarifies how AI can be effectively leveraged to develop personalised learning experiences. Additional findings will be shared upon completion of the interviews. This research contributes to the literature by highlighting the potential benefits of AI in decision-making in academia (e.g., developing a more personalised and effective learning experience). Additionally, the study investigates potential challenges (e.g., potential misuse and detrimental effects on academic integrity) that can help educational institutions, educators, students, and other stakeholders adopt responsible AI in education settings. Ultimately, the study's outcomes can facilitate a broader understanding of responsible AI adoption in the higher education sector.

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SESSION ABSTRACT

Programming assessment revisions to recapture assessment validity in the face of GenAI

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ABSTRACT

Accurate and appropriate assessments are crucial to the ability of an educator to measure student progress (Carless 2007; Raupach et al. 2013). In recent times Generative Artificial Intelligence (GenAI) has threatened the validity of traditional assessment methods (Lodge et al. 2023). In response the Tertiary Education Quality and Standards Agency has released a series of guidelines which consider AI usage in Assessments as vital and authentic instead of an academic integrity threat (Lodge et al. 2023).

The study of computer programming is traditionally considered a practical endeavour where student ability to perform is often seen as equivalent to student knowledge (in line with Constructivism (Bada & Olusegun 2015) and Experientialism (Lewis & Williams 1994) philosophies). In practice this results in an onslaught of standardised programming tasks which were carefully designed to practice the intended concepts. These programming tasks are so conventional that they are used for training AI systems which actively reinforces the concerns regarding their validity as assessment.

This session reports on an assessment investigation undertaken in my Applied Data Structures course centred on "How can programming assessments be revised to recapture assessment validity in the face of GenAI?". The strategy utilised was an homage to predecessors who battled the emergence of the other technologies like the calculator (Waits & Pomerantz 1997), the computer (Brown 2000) and even the written word. The two resultant assessments were tested by 26 students in Study Period 3 and GenAI use was allowed and encouraged.

Student feedback was collated through points embedded in the assessment design. Students were asked to self report their usage of GenAI tools, how they utilised them and what steps were taken to ensure accuracy.

The presentation acts as a review of the investigation, a summary of the current findings and the plans for the future.

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WORKSHOP ABSTRACT

Navigating AI tools for Undergraduate assessment pedagogy: Instruction, Utilisation, and Integrity

Sarah Davey, Timothy Barnes, Chris Della Vedova, Kuan Tan
University of South Australia

ABSTRACT

Background/context

The performance and capabilities of generative artificial intelligence (GenAI) technologies are rapidly expanding, likely to become embedded into the working professional environment (Haleem, A, 2022). Additionally, large language model AI tools such as ChatGPT and CoPilot are gaining popularity with undergraduate students to support their learning at University. However, the educational sector is concerned about the over-reliance and improper use of GenAI tools. Many institutional policies revolve around the concept of "appropriate use" of GenAI being acceptable and identifies the need for appropriate training of students and academics when navigating GenAI and assessment (AAIN Generative AI Working Group, 2023). Therefore, the task falls upon educators to properly train and educate students to respect the affordances of GenAI and be aware of the current limitations.

Description

In the two years since the launch of ChatGPT by OpenAI, academics have been racing to stay ahead of student behaviours and GenAI capabilities. To respond rapidly educators quickly adapted, altered or re-designed assessments capable of evaluating and measuring student learning. This project intends to investigate the successes and limitations of assessments that embrace GenAI.

Intended outcome

The intention of this roundtable is a sharing of knowledges and experience around two key aspects regarding GenAI in assessments. Firstly, identifying innovative assessment designs that adopts GenAI whilst assessing student learning outcomes. Secondly, development of supporting resources provided to students that foster their learning and develop GenAI literacy skills. These discussions intend to inform a project to develop and produce a portfolio of assessment types and their relationship with GenAI as a resource for academics.

Engagement

This session will engage participants through interactive discussions and collaborative exploration of the strengths, opportunities, challenges and weaknesses of assessment design while embracing GenAI. We propose to explore, discuss, compare, and contrast experiences of fellow higher education academics that embrace GenAI, uphold academic integrity and effectively evaluate student learning in assessment. In parallel, we're interested in the resources and support provided to students that integrate pedagogy for the development of AI literacy skills. We also invite academics to reflect and evaluate assessments in their current practice with respect to GenAI use.

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SESSION ABSTRACT

Is learning with ChatGPT really learning?

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ABSTRACT

The recent proliferation of Large Language Models (LLMs) raises questions as to the role of such tools both within an educational learning environment and their epistemic capacity. If, as Alfred North Whitehead remarked, western philosophy indeed 'consists of a series of footnotes to Plato', it is important to evaluate the position of LLMs in his epistemological framework.

Central to these questions is the question of how LLMs arrive at conclusions, and the degree to which these can be epistemologically justified. Likewise, whether LLMs can serve as a foundation for attaining knowledge is essential to understanding how LLMs should be used within a learning environment. After all, if the information created by LLMs cannot qualify as knowledge, and it is incapable of giving rise to knowledge in the student, is learning with AI really learning?

We examine these questions by evaluating Plato and existing scholarship regarding his epistemology (Nawar 2013), combining this with a brief outline of the architectural features of GPT-3 and similar LLMs, before finally addressing whether they meet Plato's criteria, and where they stand in relation to education in general. Although we focus on LLMs in particular as they have the potential to be especially disruptive, many of the relevant principles underlying LLMs are shared across other AI tools.

This talk will introduce an outline of Platonic epistemology according to his dialogues. Then, we will explain some of the architectural features of LLMs within the context of this Platonic epistemology (Brown et al., 2020), highlighting possible consequences of this epistemology (Berglund, Tong, et al., 2023). Specifically, we will explore how large language models can be said to learn, as well as the limitations and opportunities presented by the use of such models within the context of human learning. Regarding observed limitations facing these technologies, we suggest possible methods by which a Platonic epistemology could be better reflected. This may provide opportunities for architectural improvement and suggest the ways in which the use of such AI tools can best support student learning.

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SESSION ABSTRACT

A comparison of generative AI applied to university assessment tasks across multiple disciplines

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ABSTRACT

Generative Artificial Intelligence (GenAI) is a specialised AI focused on producing realistic and innovative content and therefore is most popular among higher education students (Salinas-Navarro, 2024). Using GenAI can enable students to generate content more quickly and efficiently than otherwise possible. Large language models (LLM) in particular, have gained significant attention due to their ability to not only generate realistic text-based content, but also to address other needs in technical disciplines such as programming and project management. LLMs have been shown to be useful assistants in developing artifacts (Schroder, 2023) and summarising complex information. Despite gaining widespread interest, concerns about its reliability, accuracy and problem solving are genuine (Ouyang et al, 2023). Additionally, students may lack skills in critical judgement and therefore be inclined to trust outputs produced by GenAI without necessary validation (Amoozadeh, 2024).

The utility of these tools in solving different assessments tasks in IT (project management), Mathematics and Science disciplines was tested using CHATGPT3.5. The assessment types included written artefacts, identifying gaps within literature, solving mathematical and machine-learning problems. The tasks in each unit have been aligned with the GenAI scale developed by Perkin's et al. (2023), based on differing advice to students regarding the use of LLMs in answering their assessments, with one teaching unit allowing free use, one allowing limited use and one disallowing the use of LLMs. Where the use of LLMs were encouraged, students were provided with training on how to use these systems as well as warnings regarding the potential for hallucinated content. On the tested tasks, the LLM provided solutions that were vastly incorrect, partially correct and nearly perfect. It is important to note that it was possible to improve the responses for the partially correct answers by changing the query, while responses to questions that required critical analysis proved problematic to the LLM. There has been an increasing attention given to the use of LLMs to assist in coding with multiple systems including Microsoft CoPilot focussing on this task. Thus, it came as no surprise that these systems were able to analyse problems in the machine-learning and programming units very well and were able to provide structured responses with adequate justifications for the choices made. The code samples were in some instances, incorrect, contained redundances or included explanations beyond what was requested. While the LLM was unable to correctly respond to queries that required critical analysis, or a high level of detail, LLMs have been shown to be very good tools for conversational learning and explanations.

Overall we are investigating the efficacy of incorporating GenAI tools into assessment in various STEM discipline contexts. Our focus is on the accuracy of LLM outputs and comparing the value of differing levels of scaffolding for students in the generation of quality outputs for both student engagement and the development of digital literacy skills.

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WORKSHOP ABSTRACT

Enhancing student success and retention: Leveraging learning analytics and student engagement strategies

Ali Enright, Helen Harrison, Eliza Kitchen, Samantha Kontra, Masha Smallhorn
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ABSTRACT

Student success is an essential component of higher education. Factors encompassing success are multi-faceted ranging from academic achievement, engagement, and progression within programs through to employment, skills development, and co-curricular activities. Student success can be enhanced by embedding transition pedagogy into curriculum (Kift, 2009) and facilitating the development of a sense of capability, purpose, identity, resourcefulness and connectedness (Lizzio, 2006).

At Flinders University, we have applied student success literature to create Student Success Frameworks at the institution and College-levels (Kift, 2009; Lizzio, 2006; Lane et al., 2019). These college based student-centred and holistic frameworks utilise the University strategy principles but provide tailored initiatives addressing specific college needs.

A key initiative of all six college level student success frameworks is the implementation of a personalised student outreach initiative using learning analytics to identify students needing support and provide 'nudges' to encourage retention and student success (Lawrence et al., 2021; Brown et al., 2022).

Learning analytics provide an effective tool for identifying and supporting students at risk of low engagement and topic non-completion (Lawrence et al., 2019). Evidence shows that leveraging students' analytics to inform outreach strategies effectively retains students in courses (see Ifenthaler and Yau (2020) for review). Despite evidence that learning analytics support student success, only pockets of academic communities normalise their use in everyday practice (Guzmán-Valenzuela et al., 2021).

Participants will walk away from this workshop with an understanding of how to assess student engagement and conduct outreach using learning analytics in Moodle, Canvas, and Blackboard; creating an outline for a Student Success Framework; and having an action plan of how to embed student success in their area.

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SESSION ABSTRACT

Using forensic techniques to identify cheating, by use and abuse of AI, in student submissions.

Stewart Walker
Flinders University

ABSTRACT

Students have always tried to cheat - and they always will. But the ways in which they cheat change. So the ways the cheating can be detected also needs to change. The presenter teaches forensic and chemical topics to undergraduate, honours and masters students. This paper will present examples where forensic document examination practices have been, and can be, used to detect the use and abuse of AI in student submissions. Older techniques such as ink, typewriter/printer and paper comparisons are still valid and are being supplemented by modern computer-based techniques for comparison of uncommon words, grammar and other clues. Feedback from previous presentations and discussions with international academics from international conferences have been used for the continued development of these investigations and will be presented in this paper. Examples include the sudden change in font or size, evidence of 'cutting and pasting' and the use of unusual words or phrases. The use of police interrogation techniques - in-person oral/viva - has been effective.

The field of AI use and detection is constantly changing. Recent developments include controversy in Australia over COSMOS1 - a leading science publication - using OPENAI's GPT-4 to generate explainer articles. Then using a Retrieval-Augmented Generation (RAG) system to self-check based on 'picking over' 15,000 previously published articles. The consequences for journalistic standards, employment of journalists and even who has copyright over the original and AI generated articles is questioned.

Obtaining reliable data on the extent of AI use in academia (both by students and academics) is fraught with difficulties. A recent report2 in August 2024, commissioned by AIPRM – an artificial intelligence company - attempted to quantify the extent of AI use in UK Universities and showed an order of magnitude difference between the maximum (211) and minimum (22) number of students reprimanded in Scotland institutes for AI use - however these figures require information on the total number of students investigated to compare the extent. In addition, of the 157 universities in the UK, 15 claimed they did not have any students cheating with AI - however, only 80 universities supplied data, so 77 out of 157 universities did not reply to the Freedom of Information request.

These reported figures are also open to interpretation. For example, a university reporting low use has four potential interpretations -1) students at that institute do not use AI, 2) students at that institute are clever enough to use AI and not be detected, 3) the university is inept at detecting use or 4) are deliberately under-reporting detection of AI.

As AI develops - as it will in the time between writing this abstract and presenting the paper - it will get better and more widespread so universities, academics and students will need to keep up with developments in the detection of use and abuse of AI.

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SESSION ABSTRACT

Embracing AI in mathematics assessment

Amy Trang Nguyen, Hayden Tronnolone
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ABSTRACT

Artificial intelligence (AI) brings the promise of performing tedious tasks while providing support with difficult problems [1]. University graduates entering the workforce will be expected to be able to use AI to perform tasks, which includes both the best approaches to get answers and an awareness of the limitations of this technology [2]. Graduates in mathematics will enter careers on the basis of strong critical thinking and problem-solving skills, along with the ability to handle numerical data, and thus must know how to augment these with AI [3].

We here outline an assessment item for mathematics students that is designed to address these requirements. The task is run during Complex Analysis, a third-year mathematics class with a focus on reasoning and proof. Students are required to solve representative problems, selected to test the limitation of the generative AI ChatGPT and report on the results. In particular, students must evaluate the performance of the AI and decide whether the result produced is appropriate, simulating how this tool would be used by them in the workplace.

We report on the design of this task, how it was implemented, and potential pitfalls for this type of task, demonstrating that this is a viable assessment method. Importantly, this task provides students with an authentic assessment experience while still engaging them in the mathematical field of Complex Analysis.

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SESSION ABSTRACT

The Human-in-the-Loop Model: Perspectives from Health and STEM Academics.

Mary Butler, Kuan Tan, Kathy Darzanos and Eileen Giles
University of South Australia

ABSTRACT

The rapid integration of Artificial Intelligence (AI) into various fields necessitates a critical examination of how it can be effectively employed in education. This workshop will explore the Human-in-the-Loop model, a conceptual framework that emphasizes the selective inclusion of human participation in AI-driven processes, rather than full automation. The goal is to foster a dialogue on how AI can be utilized to augment, rather than replace, human capabilities in educational settings.

Workshop Objectives:

Reframe the Conversation about AI in Education: Shift the focus from automation to meaningful human-AI collaboration. Discuss the importance of aligning AI integration with the educational goals of developing compassionate, ethical, and competent professionals.

Explore Practical Applications: Provide concrete examples of how AI can assist in personalized learning, hypothetical reasoning, and decision-making processes.

Address academic integrity concerns: Acknowledge and address the concerns students and academics have regarding academic integrity and the fear of AI being a distraction. Emphasize the importance of human judgment and ethical reasoning in the use of AI tools.

Promote Interactive Autonomy: Discuss the concept of interactive autonomy, where AI and humans work collaboratively in complex, creative spaces. Highlight the benefits of this collaboration for both learning and professional practice.

Encourage Reflective Practice: Demonstrate how reflective practice can be integrated with AI to promote deeper learning and self-awareness among students. Discuss how AI can be used to support the development of empathy and client-centred care.

Showcase AI Extending Human Capabilities: Illustrate how AI can extend human capabilities, leading to better, more publishable assignments and work that is closer to real-world applications for students.

Workshop Structure:

Introduction (10 minutes): Provide an overview of the Human-in-the-Loop model and its relevance to education. Present the key concepts and goals of the workshop.

Case Studies and Examples (10 minutes): Present case studies and examples of AI applications in healthcare education. Highlight how these examples align with the principles of the Human-in-the-Loop model and promote ethical reasoning and reflective practice.

Group Activity (15 minutes): Divide participants into small groups to brainstorm and develop their own examples of how they currently use AI in their teaching practices and how they could integrate AI into their teaching practices using the Human-in-the-Loop model. Provide guiding questions and support as needed.

Sharing and Reflection (5 minutes): Allow each group to share their ideas and reflections with the larger group. Discuss common themes, insights, and potential next steps.

Conclusion:

This workshop aims to provide healthcare educators with a theoretical and practical framework for integrating AI into their teaching practices.

SESSION ABSTRACT

Don't Be Sorry, Just Declare It: Pedagogical principles for the ethical use of ChatGPT, master bullshit artist of our time.

Benito Cao
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ABSTRACT

Artificial Intelligence (AI) has become an integral part of our lives, and education is no exception. As AI technologies are increasingly employed in educational settings, it becomes imperative to ensure their responsive and ethical use (e.g. Jobin et al 2019; Strzelecki 2023; Bobula 2024).

This presentation focuses on what is arguably the most popular manifestation of generative AI: ChatGPT. The title of the talk is intended partly as a provocation, but one that will help understand (conceptually) and begin to overcome (pedagogically) some of the challenges posed by ChatGPT.

The first part examines ChatGPT from a critical perspective, deploying the philosophical work of Harry Frankfurt On Bullshit (2005) to conclude that ChatGPT is the master bullshit artist of our time (e.g. Hicks et al 2024). The second part explores and illustrates the integration of three principles to promote the ethical use of ChatGPT: caution, trust, and transparency (e.g. Currie 2023; Harrington 2023; Rahman et al 2023). These principles amount to: a) cautioning students about the use of ChatGPT; b) developing a trusting environment between students and teachers; and c) expecting transparency from students in the form of a ChatGPT Appendix. In essence, this approach reflects the advice provided by Australian Customs and Biosecurity to people who arrive in Australia: "Don't Be Sorry, Just Declare It."

The available evidence, drawn from the implementation of this approach in a course with 102 enrolments, indicates that students responded well to this pedagogical initiative. Significantly, the evidence also suggests that this approach can minimise the cases of academic misconduct. In this course, most students chose not to use ChatGPT and those who used it did so in limited and acceptable ways (e.g. assist with expression, idea generation, improve understanding). There were only three essays that required a follow up conversation. Feedback from colleagues suggests this approach can assist with the development of teaching practices that address some of the most urgent pedagogical challenges posed by ChatGPT.

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SESSION ABSTRACT

Reviewing and Rethinking assessments in the age of Gen-AI: An action research study

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ABSTRACT

Background

The emergence of Generative Artificial Intelligence (Gen-AI) has raised significant concerns about the integrity of traditional assessments, particularly those that fail to fully capture students' deep learning and transferable skills. In health science (HS) degree programs, the reliance on such assessments poses a risk, as students may leverage Gen-AI to graduate without mastering the essential skills required for sound clinical decision-making. To address this risk, it is crucial to adopt a sustainable strategy that involves a critical re-evaluation and reform of assessments, ensuring they foster creativity, meaningful learning, and alignment with broader educational goals (Lodge et al., 2023). With this consideration, within HS vertical at our university, we initiated an action research project to review and redesign our current assessments.

Method

Guided by McNiff, & Whitehead, (2011), we designed a 3 iterative cycle action study. In Cycle 1, assessments from three foundational HS subjects were reviewed using an assessment appraisal tool developed by HS academics. This tool was aligned with Gen-AI and academic integrity guidelines from leading institutions (Lodge et al., 2023a; Monash University, 2023; Flinders University, 2023; TEQSA, 2022; Torrens University n.d.). The tool was further refined through the results and reflection of cycle 1 and applied in Cycle 2 to review an additional 53 assessments across 16 HS subjects, informing a strategic plan for assessment reform. Cycle 3 is currently underway and is focusing on implementing the strategies identified, leading to a comprehensive redesign of assessments across all HS subjects.

Findings

The review of assessments in cycle 1 and 2 indicated the need for significant improvements in our assessment tasks to reduce AI risk. The need for re-designing assessments to assess learning outcomes and deep learning as well as transferable skills was also identified. The review also supported in designing the reform strategies for assessment reform to minimise academic integrity concerns arising from improper use of Gen-AI

The results of cycle 1 and 2 were shared at the HERDSA2024 conference. We have made further progress on our cycle 3 and aim to share this along with some of our redesigned assessments at the HERGA conference. This presentation will invite the attendees' perspective on our review and redesign approach.

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SESSION ABSTRACT

An AI approach for predicting the behavioural intention and perceived effectiveness of the use of ICT by postgraduate students to support their research

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ABSTRACT

Perceived effectiveness is essential in determining the extent of the postgraduate students' acceptance of Information and Communication Technology (ICT) (Almaiah et al., 2022), which can accelerate the research activities and allow them to focus more on their research projects, fostering a conducive learning environment and facilitating successful learning outcomes using technology effectively (Selwyn, 2023; Venkatesh et al., 2014). Spurred by the COVID-19 pandemic, teaching and learning in postgraduate education have shifted to new modes of learning influenced by ICTs (Sayaf et al., 2021; Zhang et al., 2022; Granic, 2022; Mishra et al., 2020; Babbar & Gupta, 2022). However, postgraduate students often require guidance in selecting the most effective technology for their research. From a more critical point of view, there is also a need to consider the negative implications and potential risks of digitalisation and disruption of higher education (Kaplan, 2022).

This presentation reports on the methodology and instruments of a study undertaken to identify the significant attributes that contribute to predicting the intention to use and perceived effectiveness of data collection ICT among postgraduate students. The investigation included organising and classifying the technological cornucopia of ICTs used in postgraduate research activities, including AI components and functionalities. The study used a hybrid approach (Grani?, 2023) utilising the Technology Acceptance Model (TAM) (Davis, 1989) and Activity Theory (AT) (Engestršm et al.,1999) as a lens for exploring the educational effectiveness of the technology. A quantitative research design was employed to explore the following questions:Ê1) Can AI be used to predict the behavioural intention to use and the perceived effectiveness of data collection ICT by postgraduate students in their research? 2) How can postgraduates' technology acceptance be predicted using artificial intelligence to determine their intention to use data collection ICT? 3) How can postgraduates' technology acceptance be predicted using artificial intelligence to determine the perceived effectiveness of ICT data collection? 4) How do postgraduate students use ICT to support their research practices?

The data was collected via survey during the COVID-19 pandemic. AI-enhanced data analysis involved utilising algorithms: Support Vector Machines (SVM), Logistic Regression (LR), Decision Tree (DT), K Nearest Neighbours (KNN), Random Forest (RF), XGBoost, and Extra Tree (ET). Exploratory data analysis was employed to discover the key attributes of the best-performing algorithms.Ê The results showed that perceived ease of use (PEOU), engagement with ICTs before COVID-19, task-related features and willingness to actively communicate electronically with the research mentors and supervisors were the strongest determinants for prediction.

The study found that the application of AI plays a pivotal role in predicting the perceived effectiveness and use of data collection ICT among postgraduate students more accurately. The results showed that AI could be effectively employed in the university ICT procurement decision-making process, enabling universities to plan the most effective technology investments and provide insights for stakeholders to prioritise the influencing factors to improve the effectiveness of ICT for postgraduate students' research projects. These results provide confidence that AI can potentially transform the future of technology in higher education.

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SESSION ABSTRACT

The Relationships Between Students' Expectations, Approaches to Learning, Academic Performance, and Wellbeing in an Online Undergraduate Program

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ABSTRACT

Online higher education is becoming increasingly important as it provides accessibility and flexibility to students with diverse needs and backgrounds. Consequently, the popularity of online enrolment has surged over the past two decades, with a 900% increase in enrolments globally since 2000 (Oxford Learning College, 2024). However, students often enter higher education with unclear expectations about what learning entails. This creates an issue in cultivating an inclusive education experience as such a mismatch, when the reality of their academic experience falls short of their initial expectations, results in poorer wellbeing and academic outcomes.

While there has been some research on expectation mismatches in traditional higher education, understanding these mismatches in the context of online higher education is a novel and emerging area of investigation. There is even more limited research examining the mechanisms linking these mismatches with online learners academic and wellbeing outcomes. Our study addressed this gap by specifically examining online learners' expectations and investigating whether students' approach to learning acts as a potential mechanism linking expectations to academic performance and wellbeing.

Students' approaches to learning can take the form of a deep approach, an attempt to meaningfully engage in learning and develop an understanding of how to apply the content, a surface approach, an attempt to avoid failure by selectively memorising content, or a strategic approach, a specific focus on assessment demands (Entwistle et al., 2000). Our research also draws on Biggs' (2000) 3P model, which proposes that the product of academic learning (e.g., student grade or wellbeing) is a result of presage (e.g., expectations, experience) and process (e.g., approaches to learning) factors.

We surveyed 113 online psychology students from first-, second-, and third-year online courses measuring their expectations of their undergraduate studies, learning approaches, university-related stress, anxiety, and burnout, and academic achievement (measured as GPA). We found that negative mismatches (when current expectations fell short of initial expectations) correlated with more study-related stress, anxiety, cynicism, and a surface approach to learning. Conversely, positive mismatches (when current expectations met or exceeded initial expectations) were associate with greater self-efficacy, higher GPA, more time spent studying, and deep and strategic learning approaches. Importantly, learning approaches mediated the relationship between expectation mismatches and wellbeing.

The findings we present will aid in the development of a more inclusive learning experience, with higher education providers aligning curriculum design and support strategies with the needs of online learners. Our research concludes that addressing expectation mismatches and promoting strategic learning approaches are important for enhancing online student success and wellbeing. Implications for educators, academic support units, and institutions include the need for more targeted onboarding processes, curriculum design that encourages strategic learning, and enhanced support systems for online learners. By focusing on these areas, institutions can better leverage the potential of online education to provide rewarding learning experiences for all.

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SESSION ABSTRACT

What do our students think? Perceptions and attitudes of healthcare students relating to artificial intelligence (AI)

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ABSTRACT

Introduction:

Recent integration of artificial intelligence (AI) across education, research, and healthcare has led to a growing interest in AI training for healthcare students. Students are continually exposed to innovations that may impact their education and careers1, though their perspectives towards AI have not been extensively researched. This presentation will report on the findings of two published studies2,3 (a scoping review and primary study), which evaluated the perceptions and attitudes of healthcare students towards the implementation of AI within their field.

Methods:

A scoping review was first undertaken, which followed the methodological guidance offered by Arksey and O'Malley4. A systematic search was conducted in the Medline, Emcare, and Scopus. Studies using both quantitative and qualitative methodologies were eligible if they explored the perceptions or attitudes of health science students in relation to AI. A primary study was then undertaken involving South Australian radiography students. After institutional ethics approval was gained, participants completed a cross-sectional online questionnaire obtaining quantitative and qualitative data relating to their perceptions of AI. Likert-item and open-ended questions were proposed. Statistical analysis tested responses against demographic data such as gender and education level. Open-text responses were grouped into themes and a narrative synthesis was undertaken.

Results:

The scoping review entailed a range of health disciplines including nursing, diagnostic radiography, pharmacy, midwifery, occupational therapy, physiotherapy, and speech pathology. Overall, students felt positively about the potential benefits AI would have on their future work. Negative perceptions related to threats of job security, and a lack of realism associated with AI. These perceptions were largely echoed in the primary study, where participants demonstrated positive attitudes, though were less convinced AI would increase future employment in the radiography industry.

Discussion/Conclusion:

Evidence from both studies indicates that healthcare students' hold many positive perceptions towards AI. However, concerns are naturally present. The results demonstrate that undergraduate students are intrigued and willing to learn about AI. The insights may help tailor AI education for healthcare students, through collaboration with industry experts and using clinically relevant resources.

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SESSION ABSTRACT

I'll do it later: Understanding learning strategies and procrastination behaviours in a blended first-year quantitative methods course for health sciences students

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ABSTRACT

Procrastination is the tendency to delay action despite knowing that this delay will likely bring negative consequences. It has been shown to be extremely common among undergraduates (Klassen, Krawchuk & Rajani, 2008) and is generally associated with negative outcomes such as missed deadlines, lower grades, extended time at university, increased levels of stress and psychological strain, as well as symptoms of physical illness (e.g. Gruschel & Schopenhauer, 2015 and Klassen et al., 2008).

The adoption of blended and flipped learning, combining face-to-face and technology-mediated instruction, is increasing in higher education and requires students to be self-regulated learners. Time management and study regularity appear to be particularly important, however students who procrastinate often struggle with these aspects of self-
regulation the most. Self-report questionnaires have typically been used to capture students learning strategies but data from a learning management system (LMS) has emerged as an alternative way of measuring procrastination and self-regulation. Using trace data and learning analytics approaches has been shown to provide valuable insights into patterns of student behaviour (Jovanovic et al., 2017; Tan & Samavedham, 2022; Bourguet, 2024).

This study examines students' learning strategies and procrastination behaviours using an online questionnaire combining the Academic Procrastination Scale (APS; McCloskey & Scielzo, 2015) with selected questions from the Motivated Strategies for Learning
Questionnaire (MSLQ; Pintrich, Smith, Garc a, & McKeachie, 1991), as well as trace data collected from the LMS. Clustering techniques are used to detect learner profiles based on self-reports as well as profiles linked to online activity in the course LMS. Profiles based on measures derived from interactions with learning resources and assessment activities proved
to be more informative and more closely related to student performance, giving us intensive self-starters, selective learners, strategic planners, and procrastinators.

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WORKSHOP ABSTRACT

Authentic assessment in the world of artificial intelligence.

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ABSTRACT

Assessment practices that are authentic are often more engaging to students and allow teachers to measure student learning in a way that is meaningful in the context those skills will be practiced beyond the classroom (Schultz et al., 2021). Writing is critical and a necessary part of science instructions and curriculum. However, generative AI has removed the authenticity of some traditional assessment tasks and inappropriate/unsophisticated use of generative AI undermines the academic integrity of those tasks, diminishing critical thinking and adversely affecting student learning (Matheis & John, 2024).

In this round table discussion, we will consider the following aspects of authentic assessment in the context of generative AI and the Comprehensive Authentic Assessment Model (CAAM) Dimensions proposed by Matheis & John (2024) of and provide examples of how these challenges may be addressed.

Challenges and Ethics: Understand the ethical implications and challenges of using generative AI in assessments. This includes issues of fairness, academic integrity, and the potential for misuse.

Opportunities for Learning: Explore how generative AI can enhance learning experiences. Authentic assessments should help students apply their knowledge in practical scenarios that are relevant to their future career.

Assessment Design: Consider how generative AI can rejuvenate assessment design. This involves creating tasks that are meaningful and go beyond preparing students for the workforce.

Fairness, Validity, and Security: Ensure that the use of generative AI in assessments maintains fairness and validity. Security measures should be in place to protect the integrity of the assessment process.

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WORKSHOP ABSTRACT

Developing Ethical IT Professionals: A Focus on Values in the Age of AI

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ABSTRACT

Information Technologies (IT) permeate every walk of life and can potentially cause harm to some, while benefiting others. In March 2024 the UK government introduced legislation quashing former offences arising from the UK Post Office scandal, which has been referred to as "the largest miscarriage of justice in UK history" (Nokes & Moorhead, 2023). This dilemma was caused when software developers failed to persuade managers that releasing incomplete, faulty software was unethical. This case highlights the requirement for educators to facilitate learning exercises that prepare IT students to understand professional ethics issues. Ethics competencies are especially critical for IT professionals in an Artificial Intelligence (AI)-driven world, given the challenges AI poses across all professions (Al-Saggaf, Burmeister & Schwartz 2017; Cox 2022).

We propose an innovative teaching and learning approach for IT students to develop ethics competencies by observing and voicing value tensions through Value Sensitive Design (VSD). VSD is a methodology which considers the values at stake when designing and using technology. Technology design mediates how it is used and enables users to practice ethics through the values afforded in its design (Verbeek 2011; Vallor 2018). Unpacking ethical dilemmas through value tensions offers an opportunity to consider values that may conflict but hold importance (Friedman & Hendry 2019).

Learning tools that enable students to observe, discuss and knowingly apply values relevant across professions are scarce. We propose the use of VSD conversation cards to explore the value tensions between social and market-based norms at play through online interactions (Fernando 2020; Fernando & Scholl 2020). The VSD conversation cards were developed to enable IT students to observe, reflect, and discuss value tensions in the Australian tertiary education context. We plan to evaluate the impact of the VSD cards across undergraduate and postgraduate IT courses using pre- and post-test factorial vignette surveys and focus groups of students and tutors. The conversation cards will enable students to practice their graduate attributes, develop their professionalism and learn data ethics literacy skills. The cards enable authentic learning experiences as students are guided when discussing ethical dilemmas in practice which impact the design, development, and use of technologies.

This workshop is aimed at engaging multi-disciplinary educators to co-design learning scenarios related to IT use, whilst considering AI impacts within their professions. Participants will extend the VSD conversation cards by applying Vallor's (2018) techno-moral virtues and Zuboff's (2019) analysis of systemic drivers of innovations.

Workshop Structure

Introduction (5 minutes): Provide an overview of the VSD conversation cards as a mechanism to understand the social and market values influencing ethical decision-marking regarding data in multi-disciplinary contexts.

Small Group Activity (20 minutes): Invite small groups to design a learning activity using the VSD cards, considering IT uses and AI impacts.

Discussion (15 minutes): Groups share their learning activities. Participants reflect on how the artefacts can embed ethics competencies into their teaching and learning contexts.

Following the workshop, educators will have access to a repository of these learning activities. Students will be empowered to develop ethics competencies when engaging with IT within their profession. Future IT students will also benefit from increased access to multi-disciplinary scenarios when designing and developing technologies in the age of AI.

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