2024 SoLT BOOK OF PROCEEDINGS

SCHOLARSHIP OF LEARING AND TEACHING CONFERENCE

Acknowledgement of Country

TAFE Queensland acknowledge the Traditional Custodians of Country throughout Australia and respect the continuing connection to land, waters, cultures and family that Aboriginal and Torres Strait Islander peoples uphold.

We pay respect to Elders past, present and future. We recognise that teaching and learning has taken place on country for over 60,000 years and two-way learning is an important part of our reconciliation journey.
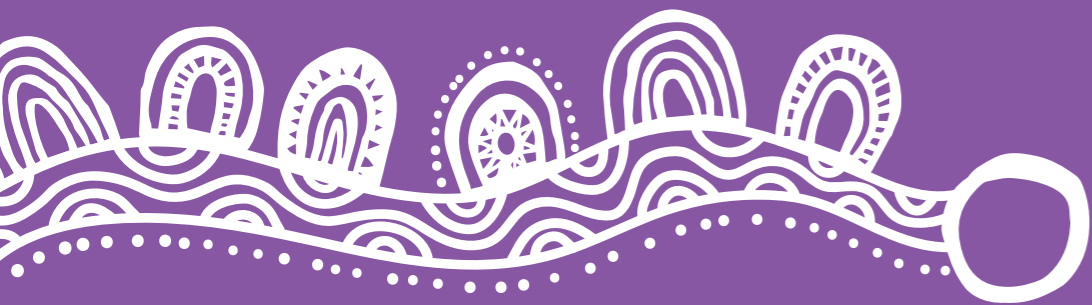
Artwork elements from TAFE Queensland's Reconciliation Action Plan artwork 'Connecting Knowledge - Connecting Cultures' by Riki Salam. Visit tafeqld.edu.au/RAP to view the Reconciliation Action Plan.
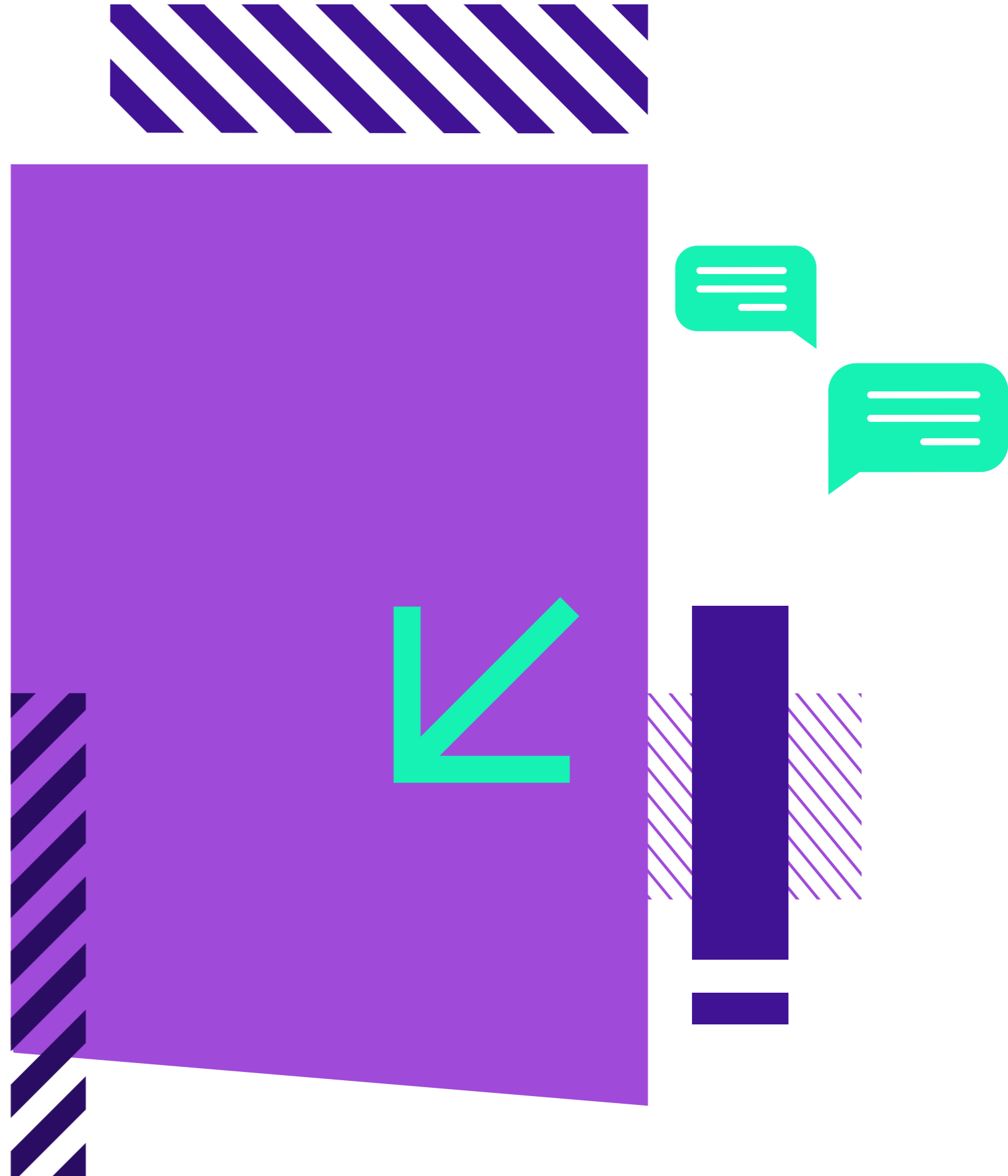
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Conference overview

The 2024 Scholarship of Learning and Teaching (SoLT) conference **was hosted by TAFE Queensland, June 26-27, at the South Bank campus and online to enable regional and remote access. In line with the Universities Accord Final Report, the 2024 SoLT conference theme was Access, Equity and Pathways.**

As a national research conference, the 2024 SoLT conference included 64 in-person participants and 26 online attendees.

External engagement was strong and conference participation/contributions stemmed from various peer institutions including, James Cook University, Swinburne University of Technology, University of Technology Sydney (UTS), Queensland University of Technology (QUT), University of Canberra, Torrens University, Chisholm Institute, TAFE South Australia and TAFE Queensland.

The two-day event program comprised, six workshops, four concurrent tracks, 12 presentations, an interactive panel session and 17 poster presentations. Various awards were also announced just prior to the official conference close: Best Paper, Best Poster and Most Engaged Faculty.

Professor Amanda Wilson, UTS, presented the Keynote address titled "Inclusive education: Enhancing learning through diversity." Panelists discussed the topic of "Connecting quality education and the scholarship of teaching and learning." Workshop topics ranged from VR technology to tranquility through embroidery.

An outcome of the 2024 SoLT conference is this published Book of Proceedings. A further consequence of the conference is the establishment of a research culture at TAFE Queensland. More than that, TAFE Queensland is demonstrating research leadership amongst peer institutions and dual sector universities.

The purpose of the SoLT conference is to enable research-oriented presentations and networking amongst VET and higher education educators, professionals and those interested in research related to VET and higher education.

An invitation to contribute, attend and participate was distributed state-wide to TAFE Queensland VET and higher education educators. More broadly, invitations were extended to peer institutions, dual sector universities and other TAFE institutions.

Appendix A presents the conference program schedule.

As shown in Appendix A, the 2024 SoLT conference program was scheduled across two-days. Day 1 (June 26) included four workshops:

1. **"Effective strategies for implementing diversity and inclusion in pedagogy,"** presented by Associate Professor Taha Chaiechi from James Cook University

2. **"Sharing successful student stories to inspire pathways"** presented by Serena Seah, Julie Conan-Davies and Sherry Jiang from Swinburne University of Technology

3. **"Finding tranquillity through embroidery: A hands-on journal of mindfulness and creativity"** presented by Ola Pak and Alaina Jones from TAFE Queensland Creative Arts faculty

4. **"Unlocking classroom potential with VR technology"** presented by Steven Onn and Craig England from SkillsTech TAFE Queensland.

Day 2 (June 27) began with an official opening presented by John Tucker, CEO TAFE Queensland and then, Nik Babovic, General Manager Operations, TAFE Queensland and Adjunct Professor Torrens University, provided a strategic overview of higher education developments at TAFE Queensland.

From there, Professor Amanda Wilson delivered the Keynote address, titled "Inclusive education: Enhancing learning through diversity." This Keynote presentation was interactive and well-received, generating some thoughtful questions from the audience and provided an excellent start to the conference overall.

Following morning tea, two concurrent tracks began with three presentations scheduled for each session, allowing for 20 minutes presentation, five minutes of questions and five minutes to change rooms if preferred. Conference participants were encouraged to move freely between the tracks and presentations. Following a catered lunch, the concurrent tracks continued. Simultaneously with the two concurrent tracks, before and after lunch, Dr. Schembri (Dean, Higher Education, TAFE Queensland) presented two workshops: Research Ethics and Publishing SoTL.

Table 1 presents a summary of contributions presented from University of Canberra, Central Queensland University, Torrens University, Chisholm Institute and TAFE Queensland. As Table 1 shows, Tracks included:

- Teaching and Learning innovations
- Pathways and Partnerships
- Future Trends and Challenges

The SoLT conference also included an interactive panel session addressing the question of connecting quality education and scholarship of teaching and learning.

The panel was facilitated by Dr. Sharon Schembri and panellists included:

- Professor Amanda Wilson, University of Technology Sydney
- Associate Professor Michael Cowling, Central Queensland University
- Dr. Anitza Geneve, TAFE Queensland
- Nik Babovic, TAFE Queensland GM Operations and Adjunct Professor at Torrens University.

Running concurrently with the panel session, a poster session included 17 poster presentations. Poster presentation contributors stemmed from University of Canberra, Chisholm Institute and TAFE Queensland. Participants were provided a QR code to enable voting for the Best Poster.

Table 1: Summary of contributions

Track	Title of contribution	Author(s)	Affiliation
	Scholarly approaches to creative practice	Dr. Taana Rose	QUT
	An investigation into students as active partners in teaching and learning in pathology vocational education and training	Courtney Colless, Peyton Antoniou and Tianna Sparrow	TAFE Queensland
Teaching and Learning Innovations	Investigation into learning and teaching experiences in the Community Mental Health Alcohol and other Drugs topic using a Problem Based Learning (PBL) approach	Dr. Andy Pham, Dr. Ben Allitt, Joy Yeardsley and Peter Hubber	Chisholm Institute
	Integrating clinical cases in dentistry with oral presentation	Dr. John Souza	TAFE Queensland
	Exploring the effectiveness of poster presentations as an innovative assessment method in STEM education	Dr. Indunil Jayatilake	TAFE Queensland
	Creativity and assessment assurance in higher education	Dr. Jenny Game	Chisholm Institute
	Exploring enrolled nurses' perception on clinical placement	Francisca de Kock	TAFE Queensland
Pathways and Partnerships	Pedagogy before technology	Dr. Michael Cowling	Central Queensland University
	Adoption of a digital capability framework: Strengthening pathways in the tertiary sector	Dr. Anitza Geneve	TAFE Queensland
	Supporting success: EdTech Trial leads to surprising discovery	Dr. Rachel Campbell	University of Canberra
Future Trends and Challenges	Creatively navigating Generative Artificial Intelligence in higher education assessment	Tom James	TAFE Queensland
	Contract cheating, Generative AI – Trends, detections and the future	Prashant Singh and Matthew Chacko	Torrens University

In closing the 2024 SoLT conference, the following awards were announced:

- Best paper award: Dr. Anitza Geneve for her paper titled, "Adoption of a digital capability framework: Strengthening pathways in the tertiary sector"
- Best poster award: Kudakwashe Talent Mundanga for their poster titled, "Save the Earth Now, Stop Global Warming!!!"
- Most Engaged Faculty: Dr. Indunil Jayatilake, Civil Engineering Senior Lecturer

Table 2: Summary of poster presentations

Table 2 summarises the 17 poster presentations, which strongly featured the work of TAFE Queensland Environmental Engineering student posters

Title of poster	Author(s)	Affiliation
The Impact of Technological Advancements on Global Deforestation Throughout History	Adrien Mccandless	
Melting Ice Caps	Felix Mariosu Laime	
Toxic Pollutant Runoff: Sugarcane Industries Australia	Vanessa Pardo	
Air Pollution	Kokeon Kim	
Genetic Engineering	Chabod Ekubamieael	
Footprints of Change: Engineering Net Zero Carbon Buildings	Ian Paulo M. Aguila	
Soil Pollution	Harshana Lal	TAFE Queensland Environmental Engineering students
Ozone Layer	Alex Sanabria	
Sorting our way from E-Waste to sustainability	Tejas Yamben	
Combatting Acid Rain! A Call to Action	Justin Shim Che Wu	
Save the Earth Now, Stop Climate Change!!	Kudakwashe Talent Mundanga	
Reduce Waste, Feed the Future: Let's Make Every Bit Count!	Carlos Pinilla Rueda	
Ozone Layer Depletion	Sebastian Pinas Davila	
Humanising Student Engagement	Tom Grice and Ola Pak	TAFE Queensland
Kids (in) these days: Creating powerful learning experiences for today's students	Dr. Scott Bridges	University of Canberra
Transition from VET to Higher Education: Teacher to Lecturer	Dr. Ross McLennan	
Transition from VET to Higher Education: practitioner perspectives a decade into a dual sector partnership	Dr. Ross McLennan	TAFE Queensland

2024 SoLT conference contributions

Scholarly approaches to creative practice

Dr. Taana Rose, QUT

This research project seeks to increase equity and inclusion in technological learning. The expected research outcomes will include exploring experiential learning, increasing equity through students designing their free website to showcase their ePortfolio music works and undertaking self-experiential prototyping for the creation process. The implications are creating an accessible course for students who would not otherwise have the resources to learn digital website design and the outcome will include disseminating their music works through a website.

This project will draw upon the research conducted by Rose, Klein and Teixeira (2023), using the prototyping in figures 16 and 17 (Rose et al., 2023). This approach is innovative as it uses innovative technologies, namely extended reality technologies and digital music creation software, and creating a website on Weebly for dissemination as an ePortfolio.

This research will employ autoethnography as the methodology. It is situated at the intersection of creative practice, innovation, experiential learning, access, and equity. By democratising new technologies for every student to use and learn, equity and inclusion will be increased. Drawing upon the concept of democratisation put forth by Striner, Halpin, Röggla, & Cesar (2021), this can be applied to increasing accessibility to learning new technologies for music creation and dissemination, in which students learn how to prototype their experiences and use free website creation sites such as Weebly to disseminate their music works, thus shattering the glass ceiling of cost for low-socioeconomic students.

The research question is, 'How can innovative technologies be taught and disseminated in higher music education?'

The issue is the cost/accessibility to dissemination services for music ePortfolios. Teaching innovative technologies is at the forefront of this research. Intervening and addressing the challenge of lowering the cost of learning innovative technology and disseminating music works on free platforms. What needs to be addressed is teaching website design to music students so that they have a publicly accessible ePortfolio.

Potential options include teaching website development, extended reality art and music creation, and universities providing the technology in the classroom so that using new technologies is not expensive for low-socioeconomic students.

By evaluating alternatives, such as paid website creation, one can see that students will overcome an accessibility hurdle when they learn to create their ePortfolios for future employers. This direction was taken as all creatives require ePortfolios to apply for commissions.

The methods of data collection include autoethnography by students and educators. According to Creswell (2002) and Reed-Danahay (1997), autoethnographic research connects one's personal experience with the broader sociocultural context. Autoethnography is a form of prose and exploration of connective self-experience. According to Luitel (2009), personal and professional experiences form the basis of personal inquiry. Students will prototype the music experiences and website design process by experimentation and prototyping (Norman, 2013; Schell, 2008).

References

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th edn). Boston, MA: Pearson.

Luitel, B. C. (2009). Storying, Critical Reflexivity, and Imagination. *In Contemporary Qualitative Research* (pp. 217–228). Dordrecht, Netherlands: Springer Netherlands. https://doi.org/10.1007/978-1-4020-5920-9_19

Norman, D. A. (2013). *The design of everyday things* (Revised and expanded edition). Cambridge, MA: MIT Press.

Rose, T., Klein, E., & Teixeira, F. F. L. A. (2023). Self-experiential prototyping for augmented and virtual reality opera creation. *Chroma: Journal of the Australasian Computer Music Association, 39*(1).

Reed-Danahay, D. (1997). *Auto/ethnography.* New York, NY: Berg.

Schell, J. (2008). *The Art of Game Design: A book of lenses.* CRC press: Boca Raton

Striner, A., Halpin, S., Röggla, T., & Cesar, P. (2021, June). Towards Immersive and Social Audience Experience in Remote VR Opera. *In Proceedings of the 2021 ACM International Conference on Interactive Media Experiences* (pp. 311-318).

An investigation into students as active partners in teaching and learning in pathology vocational education and training

Courtney Colless[1], Peyton Antoniou[2], Tianna Sparrow[2]
[1]TAFE Queensland, [2]TAFE Queensland Student

Kahoot, a game-based online learning tool has been highly implemented by educators since COVID-19 (Downie et al., 2021; Toma, Diaconu & Popescu, 2021) and studied for its impact on teamwork, engagement, problem solving in the medical sciences (Donkin & Rasmussen, 2021). Despite positive reported outcomes using Kahoot for student engagement, motivation, and student performance (Pham & Nguyen, 2024; España-Delgado, 2023; Madden, 2022), there has been a body of work questioning an issue surrounding student and educator anxiety (Wang & Tahir, 2020) on a game centrally focused on recording and sharing live scores associated with performance and academic ability.

The aim of this pilot study is to investigate the perceived impact of students as active partners in codesigning learning resources and acting as facilitators of said resource to: 1) decrease both educator and student anxiety in the classroom 2) improve digital literacy and 3) improving and building positive and professional communication skills. Peer assisted learning (PAL) is best supported by learning theories such as Constructivism learning theory and Connectivism Learning (Berminghan, Boylan & Ryan, 2023) and is well suited in adult learning environments.

Students will be informed of the pilot study at the orientation of their course and given the opportunity to participate without academic penalty nor discriminated against. During the course, students can choose to participate in the Kahoot sessions whereby they are not only actively leading the class and assisting other students, but they are also themselves authors of the Kahoot questions. Alternatively, they may choose to only be an active student participant. Students will be asked to complete a short survey at the end of their course. During the course, all those who gave consent to participate in the project, the educator(s), Peer Assisted Leader(s) and students will be asked to complete a reflective journal following the Kahoot sessions. An analysis of the surveys, including student enrolment data with the reflective accounts will add to our understanding of students as active participants, and has to potential to unlock what works and perhaps, more importantly, what does not lead to positive learning outcomes in the classroom, when students are Peer Assist Leaders assisting those of similar backgrounds, ages, and abilities.

References

Bermingham, N., Boylan, F., & Ryan, B. (2023). The 4C's of PAL - An evidence-based model for implementing Peer Assisted Learning for mature students. *Innovations in Education and Teaching International, 60*(3), 401–411.

Donkin, R., & Rasmussen, R. (2021). Student Perception and the Effectiveness of Kahoot!: A Scoping Review in Histology, Anatomy, and Medical Education. *Anatomical Sciences Education, 14*(5), 572–585. https://doi-org.ezproxy.utas.edu.au/10.1002/ase.2094

Downie, S., Xiaoping Gao, Bedford, S., Bell, K., & Kuit, T. (2021). Technology enhanced learning environments in higher education: A cross-discipline study on teacher and student perceptions. *Journal of University Teaching & Learning Practice, 18*(4), 1–21. https://doi-org.ezproxy.utas.edu.au/10.53761/1.18.4.12

España-Delgado, J. A. (2023). Kahoot, Quizizz, and Quizalize in the English class and their impact on otivation. *HOW, 30*(1), 65–84.

Hamilton-Hinch, B. A., Stilwell, C., Manuel, C., Hutchinson, S., Woodford, K., & Ellis, A. (2023). Peer Assisted Learning: What can students teach us and each other? *SCHOLE: A Journal of Leisure Studies and Recreation Education, 38*(3), 161–174. https://doi.org/10.1080/1937156X.2021.1969527

Madden, O. N. (2022, December). *Edutainment: assessing students' perceptions of Kahoot! as a review tool in French L2 classes. In Intelligent CALL, granular systems and learner data: short papers from EUROCALL 2022* (pp. 240-245). https://doi.org/10.14705/rpnet.22.61.1465

Pham, A, T, & Nguyen, T. B. (2024). Investigating the acceptance of Kahoot! for warm-up activities: A case study in higher education in Vietnam. *TEM Journal, 13*(1), 277–285. https://doi-org.ezproxy.utas.edu.au/10.18421/TEM131-29

Toma, F., Diaconu, D. C., & Popescu, C. M. (2021). The use of the Kahoot! learning platform as a type of formative assessment in the context of pre-university education during the covid-19 pandemic period. *Education Sciences, 11*(10), 649.

Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot! for learning–A literature review. *Computers & Education, 149*, 103818.

Investigation into learning and teaching experiences using a Problem Based Learning approach

Dr. Andy Pham[1], Dr. Ben Allitt[1], Peter Hubber[1], Joy Yeardsley[1]
[1] Chisholm Institute

Problem Based Learning (PBL) is a student-centred, small group teaching approach that relies on students' use of "triggers" from a given scenario to define their own learning intentions. Students subsequently do self-directed study before discussing and refining acquired knowledge and skills with their group members. Many researchers have reported that a PBL approach can productively support students to not only acquire knowledge but also gain other competencies such as communication, cooperation, critical thinking, decision-making, and problem-solving skills (Trullàs et al., 2022, Lim, 2012; Neville, 2009). PBL is well established within the field of medical and health education. However, relatively little research has been conducted to explore the experiences of students undertaking a PBL approach in the field of Community Mental Health, Alcohol and Other Drugs (CMH, AOD).

This project aims to investigate students' learning experiences and teacher change when developing and implementing the PBL approach in teaching Community Mental Health, Alcohol and Other Drugs (CHM AOD) subjects at Chisholm Higher Education College. The research questions include:

1. What are students' attitudes and experiences when learning CMH AOD topic with a PBL approach?

2. What are teacher's perspective towards the development and implementation of a PBL approach?

The research participants included a teacher/facilitator and 6 second year undergraduate students in the Bachelor of CMH, AOD program, at Chisholm Higher Education College, Chisholm Institute, Melbourne, Australia.

This research followed an ethnographic case study approach to investigate the second-year students' learning experiences and attitudes, and teacher's teaching practice and perspective towards the adoption of a PBL approach to address the curriculum of the CMH, AOD program. The ethnographic methodology typically collects participant observations and interviews (Anderson-Levitt, 2006; Scott Reeves et al., 2008).
The researcher was involved in the classroom practice as a research participant during the lesson observations. As a result, students can communicate with researcher and teacher during the classroom practices and interviews. The study drew on video capture of the PBL classroom, small PBL group activities, teacher interview pre- and post-PBL tutorials, students' work and student interview post-PBL tutorials.

The research data indicated that the PBL approach was helpful in supporting students' initiative and agency in presenting a key problem in the community mental health context. It was found that the PBL approach also encouraged students' discussion and reflection among small learning groups. The PBL approach appeared to be effective in helping students gain a positive attitude towards the community mental health subject and course. The implementation of PBL also facilitated the development of a sense of collaboration and community in the classroom. The results of teacher pre- and post-lesson interviews and classroom observations showed teacher's changes regarding the effectiveness of the PBL professional development program (workshops); perspective of open inquiry learning in the PBL process; and pedagogical strategies to effectively engage students in learning PBL in the CMHAOD context.

However, the research data has found there is a need to encourage students to actively involve in a PBL orientation session and provide them with extra support at this stage. In addition, the PBL professional development program (workshops) and teacher preparation for the implementation of PBL needs to be extended to ensure flexibility in the PBL process.

This study provided a fresh perspective on students' attitudes, learning experiences and teacher's changes through the adoption of a PBL approach to CMH, AOD topics. The research findings indicated that PBL approach can be applied in CMH, AOD programs. However, the PBL orientation session and teacher's professional learning appear to be essential in supporting and enhancing the effectiveness of learning and teaching with the PBL approach.

References

Anderson-Levitt, K. (2006). *Ethnography.* In J. L. Green, G. Camilli & P. B. Elmore (Eds.), Handbook of complementary methods in education research (pp. 279-296.) Mahwah, NJ: Lawrence Erlbaum.

Neville A. J. (2009). Problem-based learning and medical education forty years on. A review of its effects on knowledge and clinical performance. *Medical principles and practice: international journal of the Kuwait University,18*(1), 1–9.

Reeves, S., Kuper, A., & Hodges, B. D. (2008). Qualitative research methodologies: Ethnography. *BMJ, 337*.

Trullàs, J. C., Blay, C., Sarri, E., & Pujol, R. (2022). Effectiveness of problem-based learning methodology in undergraduate medical education: A scoping review. *BMC Medical Education, 22*(1), 104.

Integrating clinical cases in dentistry with oral presentation

Dr. John Souza, TAFE Queensland

Dentistry is a dynamic field that relies not only on technical expertise but also effective communication. The ability to present clinical cases to patients and colleagues is crucial for successful treatment outcomes. Effective case presentation is more than just conveying information; it is an art that bridges the gap between diagnosis and patient understanding.

The clinician must communicate complex treatment plans in a manner that patients can comprehend. This involves considering factors such as budget, time constraints, aesthetics, functional demands, and overall tolerance for dental procedures. Dentists must blend spoken words with non-verbal cues and visual aids to enhance patient acceptance of treatment recommendations.

Case presentation should be viewed as a conversation between the professional and the patient, and professional and professional relationship. By asking questions, pausing, and showing energy, dentists can build trust and establish an open channel. Engaging patients in meaningful discussions allows them to actively participate in decision-making. Image is important with radiographs and intraoral images. Clinical cases serve as the backbone of dental education. They provide real-world scenarios for students and practitioners to apply theoretical knowledge. Integrating clinical cases into oral presentations offers several benefits such as:

1. Contextual learning: presenting actual cases allows students to contextualize theoretical concepts and apply principles to practical situations, reinforcing their understanding.

2. Problem based learning: the trend in dental education is shifting toward case-based and problem-based learning. Clinical cases challenge students to analyse, synthesize, and solve complex problems. This approach prepares them for real-world scenarios.

3. Examination preparation to structured case presentations prepare students for examinations. By discussing clinical cases, they develop critical thinking skills and learn to justify treatment decisions.

Integrating clinical cases with oral presentations is essential for effective patient communication, student learning, and professional growth. Clinicians who master this art enhance patient satisfaction, improve treatment acceptance, and contribute to the advancement of dental practice.

References

Gerhard-Szep, S., Guentsch, A., Pospiech, P., Söhnel, A., Scheutzel, P., Wassmann, T., & Zahn, T. (2016). Assessment formats in dental medicine: An overview. *GMS Journal for Medical Education, 33*(4).

Exploring the effectiveness of poster presentations as an innovative assessment method in STEM education

Dr. Indunil Jayatilake, TAFE Queensland

In STEM (Science, Technology, Engineering, and Mathematics) education, assessment techniques play a key role in evaluating students' understanding and skills development. A comparison of student performance across various assessment activities highlights that diversity of assessment strategies is required to assess students fairly and prevent any form of discrimination (Billington, 2010). In the dynamic landscape of STEM education, the quest for innovative assessment procedures remains paramount.

Due to the technical nature inherent in engineering and STEM disciplines, these fields have traditionally leaned heavily on conventional assessment approaches including examinations, quizzes, laboratory testing and reports. While these traditional methods have their merits, they often fall short in capturing the multidimensional skills essential for success in STEM fields. For instance, poster presentations provide students with an alternative means of assessment, uncovering intellectual abilities that written exams or research papers might not reveal (Kinikin & Hench, 2012).

In engineering and STEM disciplines, it's crucial for experts to effectively communicate their discoveries to audiences who may lack technical expertise, including clients, stakeholders, or the general public. Posters provides a promising solution, offering a blend of visual communication, critical thinking, creativity and innovative ideas, essential qualities for aspiring engineers.

This study examines the effectiveness of utilizing poster presentations as a novel assessment method in Engineering and STEM education, using a case study approach. Specifically, this focuses on an environmental engineering unit offered in a non-university higher educational institution, where posters and oral presentations serve as innovative assessment tools for evaluating student performance. The environmental engineering unit is available to students in their third semester of Associate Degree in Civil Engineering (ADCE) course, and poster evaluations and oral presentations are structured as the initial assessment item.

Every student is requested to select a topic of interest, conduct independent research, develop a poster, and deliver an oral presentation on their findings. The audience for these presentations is fellow students and faculty staff. The assessment criteria are designed to spotlight real-world environmental challenges stemming from human activities and to explore sustainable solutions to address them. Students are guided through the entire process of their assessment, with continuous support, advice and feedback provided by the delivery staff.

To enhance the significance of this innovative assessment method, industry experts are invited to evaluate and offer feedback on the student posters. The combined input from both the academics and the industry experts provides students with a more thorough and balanced assessment of their posters and presentations.

Evidence of student engagement and interest in this poster assignment is readily apparent through their active participation. Thus far, no students have requested extensions for submissions, indicating a strong level of commitment and enthusiasm.

In conclusion, the abstract highlighted the effectiveness of poster presentations representing an innovative assessment technique in Engineering and STEM education, offering a platform for students to demonstrate their knowledge, skills, critical thinking and creativity in a visually compelling format. By integrating poster presentations into STEM curricula and adopting best practices for their implementation, educators can create innovative learning experiences that better prepare students for success in both academic and industry settings.

This ongoing project is expected to evaluate its effectiveness through the analysis of qualitative and quantitative data derived from student feedback as well, a process planned to commence upon the achievement of ethics clearance. This comprehensive analysis will provide insights into how well the approach resonates with students and how effectively it contributes to their learning outcomes.

References

Billington, H. L. (2010). Poster presentations and peer assessment: novel forms of evaluation and assessment. *Journal of Biological Education, 31*(3), 218–220. **https://doi.org/10.1080/00219266.1997.9655566**

Kinikin, J., & Hench, K. (2012) Poster presentations as an assessment tool in a third/college-level Information Literacy course: An effective method of measuring student understanding of library research skills. *Journal of Information Literacy, 6*(2). **http://doi.org/10.11645/6.2.1698**

Creativity and assessment assurance in higher education

Dr. Jenny Game, Chisholm Institute

How can higher education practitioners ensure assessment security and guarantee learning outcomes are met in an environment pervaded by generative artificial intelligence? The iterative of development of solutions that characterise educational design research is utilised to create new assessments and assessment types that can inform the others managing similar challenges. One of the challenges in managing generative artificial intelligence (GenAI) for educators is the predominantly general nature of much of the published information. Even discipline specific strategies can leave staff unsure of how to embrace GenAI in their teaching and how to manage the individual assessments they are using to measure learning outcomes. Chisholm Institute's Teaching and Learning Action Plan places iterative working meetings with creative conversations at the centre of its strategy to empower staff to develop their own solutions.

The working meetings are highly collaborative in nature and inclusive of multiple levels of academic oversight (Deputy Dean, Course and Subject Coordinators). Conversation starters or provocations are utilised to brainstorm and succinctly: clarify exactly what coordinators expect students to be able to do on completion of their subject; amend learning outcomes as new insights are revealed; state exactly what students will do in their assessments; identify which aspects of assessments could be done by GenAI; review what criteria will be used to measure performance and identify what new learning material and activities might be needed. Subject Coordinators find solutions in a facilitated facilitate environment where, multiple options and issues are considered.

The Action Plan process is equally a professional development and a team building opportunity for staff. It involves a combination of transformational and problem-based learning with staff at the centre. This is an effective approach when managing a diverse staff cohort and it involves collaboration and creative thinking. For some, the process is challenging at first, however, as expanded results and solutions emerge from the iterative process, productivity increases. It is consistently a scholarly activity as new approaches teaching, and assessments are systematically incorporated.

Exploring Enrolled Nurses' perception on clinical placement

Francisca de Kock, TAFE Queensland

Registered Training Organisations (RTOs) has seen a 25% overall increase in applications following the government's initiative of fee-free courses for skilled jobs in priority sectors, including the Diploma of Nursing (Government of Western Australia, 2024). Course applications and successful completion will see a further boost as the Australian Government announced the new Commonwealth Prac Payment to assist eligible students managing the cost associated with mandatory clinical placements (Department of Education, 2024). Clinical placements are an essential component of learning as it provides students with an opportunity to link and apply knowledge, theories, and skill in practice, which cannot be achieved in the classroom or simulated setting alone (Dalsmo et al., 2023). Enrolled Nurse (EN) students currently complete their first placement in a Residential Aged Care Facility (RACF), and although RACF's can prove to be valuable practice arenas, these care settings can be extremely challenging as reported by the recent Royal Commission into Aged Care Quality and Safety, which found widespread substandard care due to systemic problems like inadequate funding, variable provider governance and behaviour and workforce issues including understaffing and undertrained carers and nurses (Commonwealth of Australia, 2021). These findings coupled with students' exposure to intimate patient care, frailty, death, and challenging behaviours can contribute to negative placement experience (Laugaland et al., 2021).

The voice of EN students is absent from the literature with current findings reporting only on undergraduate nursing students' perceptions when attending clinical placement in a RACF. Therefore, a qualitative study will be undertaken to explore EN students' subjective perceptions when undertaking their first clinical placement in a RACF. Participants will be recruited from two separate campuses of an RTO in the Brisbane metropolitan area. A convenience sample of ten participants from both online mixed-mode and face-to-face delivery, will be recruited. Individual semi-structured interviews will be conducted virtually through the online platform of Microsoft TEAMS. A thematic analysis based on Braun and Clarke's (2006) approach will be used to identify common themes in the participants' perceptions when completing their first placement in a RACF (Braun & Clarke, 2006 & Cernasev; Axon, 2023).

Negative clinical placement experiences impede students' learning, perpetuate negative attitudes towards older people and ultimately discourage students to pursue careers in the aged care sector (Alshahrani et al., 2018). It is therefore vital to explore EN students' perceptions to work effectively in RACF's, as these insights can assist to inform RTO's who play a key role in not just preparing student nurses for clinical placement but ultimately to care for the rapidly growing ageing population (AIHW, 2024).

References

Alshahrani, Y., Cusack, L., & Rasmussen, P. (2018). Undergraduate nursing students' strategies for coping with their first clinical placement: Descriptive survey study. *Nurse Education Today, 69*, 104-108.

Australian Institute of Health and Welfare (AIHW) (2024). Older Australians. Australian Government https://www.aihw.gov.au/reports/older-people/older-australians/contents/about

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Cernasev, A. & Axon, D.R. (2023). Thematic Analysis in Qualitative Research: An overview. JAACP: *Journal of the American College of Clinical Pharmacy,* DOI: 10.1002/jac5.1817

Commonwealth of Australia. (2021). *Royal Commission into Aged Care Quality and Safety, Final Report: Care, Dignity and Respect. Volume 1: Summary and Recommendations.* https://www.royal com mission. gov.au/system/files/2024-03/aged-care-rc-final-report-volume-1.pdf

Dalsmo, I. E., Brodtkorb, K., Laugaland, K. A., Slettebø, Å., & Ekra, E. M. R. (2023). Learning in nursing home placement: A phenomenological study of student nurses' lived experience. *Journal of Clinical Nursing, 32*(3-4), 452-464.

Department of Education. (2024). *Commonwealth Prac Payment.* https://www. education.gov.au/higher-education/commonwealth-prac-payment

Government of Western Australia. (2024). *Thousands of students head back to TAFE fee-free in 2024* [Press release]. Jobs & Skills WA. https://www.jobsandskills. wa.gov.au/news/ thousands-students-head-back-tafe-fee-free-2024

Laugaland, K., Kaldestad, K., Espeland, E., McCormack, B., Akerjordet, K., & Aase, I. (2021). Nursing students' experience with clinical placement in nursing homes: a focus group study. *BMC Nursing, 20*, 1-13.

Adoption of a Digital Capability framework: Strengthening pathways in the tertiary sector

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Abstract

This paper delves into the potential of the Australian Digital Capability Framework (ADCF) (2023) being used as a tool to foster a common understanding of digital capabilities and skills across the education sector, with a particular focus on the tertiary sector. A common understanding has the potential to strengthen curriculum development and support the digital capability of learners and the workforce. The use of the tool can facilitate pathways across sectors. This paper identifies several barriers that adoption of the ADCF addresses. However, several limitations are acknowledged, such as the framework offering a high-level abstract construct rather than providing the granularity of specific digital skills. Nevertheless, by leveraging the ADCF, a unified approach to digital capability development will be fostered across institutions and sectors.

Introduction

In the context of the Australian education and workforce development landscape, frameworks are instrumental in shaping curricula, assessment practices, and skill recognition. For example, the Australian Qualifications Framework (AQF) provides well accepted guidance regarding 10 levels of national qualifications across higher education, vocational education and training (VET), and senior secondary school contexts or sectors. AQF levels are characterised by their specification of expected knowledge and skills (including autonomy and problem solving). Another framework, the Core Skills for Work Developmental Framework (CSfW) (DEEWR, 2013), aims to establish a shared understanding of non-technical skills across various sectors, including schools and vocational training. These frameworks provide essential structure and coherence for education and training programs.

Utilisation of frameworks faces challenges. An example of this is most evident with regards to the recognition of general capabilities. The AQF Review (Noonan et al. 2019) emphasised the need for graduates to possess not only disciplinary knowledge but also a range of skills and attributes that prepare them for employment and lifelong learning: 'employees expect to have their skills and capabilities recognised'.

Various terms such as 21st-century skills (Van Laar et al., 2020), enterprise skills, graduate attributes, and employability skills have been used interchangeably to describe these capabilities. The proliferation of multiple frameworks and absence of consensus on definitions, terminology, descriptions, and priorities creates significant challenges in practical implementation (Ananiadou & Claro, 2009; NCVER, 2003; OECD, 2005, 2018; Weldon, 2019; Golja and Clerke, 2020). While discussing the implementation of all general capabilities across sectors is beyond the scope of this paper, it is widely acknowledged that digital literacy/capability are among the most crucial for education sectors and industries in Australia. This is evident by the pivotal recommendation of the AQF Review (2019) to elevate digital literacy to the status of a core general capability essential for employment, similar to literacy and numeracy skills. This recommendation emphasises the importance of integrating digital literacy into qualifications at all levels, ensuring that graduates possess the requisite digital skills relevant to their respective fields or occupations.

Background

In 2023, the review by the Australian Universities Accord Panel recommended transitioning from a dual-sector model, which encompasses Vocational Education and Training (VET) and Higher Education (HE), to an integrated tertiary sector. This integration aims to address skills shortages effectively (Gonski and Shergold, 2021). There is significant work that needs to be done to realise this vision. Digital literacy/capability is a prudent area to focus integration efforts.

The argument for establishing a common language is long standing, as articulated by the Council of Australian Governments (COAG) Standing Council on Tertiary Education, Skills, and Employment (SCOTESE) in 2011. Subsequently, in the following decade, the Australian government published the Core Skills for Work (2012) framework. The CSfW offered a framework for general capabilities, which included 'Work in a Digital World' as one of the 10 skill areas. The government's position was that the framework would be utilised by various sectors. CSfW is not intended to supplant existing approaches to developing these skills but to provide a common foundation that is applicable across sectors (DEWR, 2023).

Training package developers have the opportunity to utilise the CSfW, along with the Australian Core Skills Framework (ACSF) to inform foundation and employability skills. Foundation skills being integral to VET training (Circelli et al., 2022). The Queensland Curriculum and Assessment Authority (QCAA) Applied Syllabus continues to draw on the Core Skills for Work (CSfW). However, achieving consensus within the education sector on the adoption of CSfW remains elusive.

Shortly following the AQF Review (2019) the Digital Literacy Skills Framework (DLSF) (2020) was published and implemented within the Commonwealth Government's Foundation Skills for Your Future Program. Covering Australian Core Skills Framework (ACSF) Pre-Level 1 to Level 3, the DLSF positioned digital literacy as the sixth element of literacy. In 2022, a review of both the DLSF and the ACSF recommended the replacement of the DLSF with the Australian Digital Capability Framework (ADCF) (Wignall, Roberts, & Scomazzon, 2022). Consequently, Australian Government funded programs such as the Skills for Education and Employment (SEE) program, that had utilised the DLSF, are in transition.

Historically, institutions in the Australian Higher Education context have taken varied approaches to address digital capabilities (Salisbury, Hannon, & Peasley, 2017). A number of institutions have adopted existing frameworks including JISC's Digital Capabilities Framework, see for example La Trobe University Digital Literacy Framework (La Trobe University, n.d.). Similarly, the Council of Australian University Librarians

(CAUL) developed its Digital Dexterity Framework (Johnston, 2020), drawing upon JISC principles (Tully, Campbell, & Kriewaldt, 2020). The significance of digital capability is recognised widely as reflected by institutions such ANU setting strategic goals to make 'digital literacy the cornerstone of our digital journey' (Kift et al., 2022).

In 2023, the Australian Department of Education, Skills and Employment (DESE) published the Australian Digital Capability Framework (ADCF), positioning it as a framework aimed at fostering common understanding and facilitating pathways between education and training sectors and workforce contexts. The publication presents an opportunity for all sectors to utilise the ADCF as a means to promote a shared understanding of digital capability.

The Australian Digital Capability Framework (ADCF) holds particular significance for the Vocational Education and Training (VET) sector, having been utilised in an analysis of training packages (Knudsen et al., 2022). Furthermore, the ADCF extensively leverages the European Union's DigComp framework (Punie & Brecko, 2013) enabling connections to internationally recognised approaches. These linkages enhance the framework's alignment with established practices both domestically and globally.

The adoption of a national digital capability framework, such as the ADCF, across various sectors indeed holds several advantages. First, it establishes a common language and understanding of digital capability, which is crucial for effective communication and collaboration within and across sectors. Second, the ADCF allows for the mapping of existing frameworks onto its structure, easing the transition process for sectors that already have established frameworks in place.

Definitions

The lack of one, consistent definition across sectors of digital capability has been a significant challenge. Spante et al. (2018) note the range of definitions used in higher education research. The Australian Digital Capability Framework (ADCF) addresses this by providing a concise definition of digital capability as: "Digital literacy refers to the ability to use, understand, and critically evaluate digital information, resources, and technologies to solve problems, communicate, and participate effectively in digital environments." This definition aligns well with existing frameworks, providing a common language and understanding for stakeholders across sectors.

Terminology

A persistent challenge, that the ADCF fails to address, is the lack of consensus regarding the definitions of other terminology surrounding digital capability and frameworks. Inconsistent terminology is evident; for example, the DigComp framework refers to competences and the ADCF uses the term capabilities. Holdsworth and Thomas (2021) observe there are differences between these two terms. Furthermore, training packages encapsulate skills as performance criteria, presenting yet another variation in language. A shared terminology creates difficulties in mapping programs to support pathways (Hodge and Knight, 2021).

High level mapping

A strength of using the ADCF is that, as a high-level framework, it can complement existing frameworks. By mapping these frameworks to the ADCF, sectors can leverage existing frameworks rather than discarding them entirely. This advances the possibilities of establishing a shared common language.

Table 1: Alignment of high-level mapping of several digital literacy/capability frameworks

	ACDC	Use	Manage	Connect	Secure	Create
3 level of proficiency'	ADCF	Focus Area 5: Technical Proficiency and Problem Solving	Focus Area 1: Information and Data Literacy	Focus Area 2: Communication and Collaboration	Focus Area 4: Protection and Safety	Focus Area 3: Digital Content Creation
3 level of proficiency'	DigComp	Problem solving	Information and data literacy	Communication and Collaboration	Safety	Digital content creation
3 'level of performance'	DLSF (example of area and skill)	3.13 Applies and experiments with digital tools and software in a range of familiar and some unfamiliar contexts	Use internet search commands to improve and narrowsearch results	Uses a range of software applications to communicate, organise and display information	Demonstrates knowledge of system safety to ensure data is protected if sysytem fails	
Capable 'stage of performance'	CSfW	Use digitally based technologies and systems 3. Identity and sove problems skill area	Access, organise, and present information	Connect with others	Manage risk	3d. Create and innovate skill area
Basic/ Intermediate proficiency level'	ASC (example of skill)	Name and identify the purpose of familiar digital devices (e.g. mobile phone, computer, tablet) - (basic)	Enter information into a database (basic)	Send a short and simple reply to an email communication using a digital device (basic)		Identifying and using rechnology (including hardware and software) confidently, creatively and critically, some create skills in specialist tasks
Yr 10	QCAA (examples) General/ Applied Cirriculum	Understand concepts and language associated with digital world	Uses digital technologies to research and interrogate information and manipulate data Accesses, captures and analyses information, including primary and secondary data		Is a safe, positive and responsible user of local and networked computer-based resources	Identifies how digital technology and digitally based systems can extend, enhance or make possible specific aspects of a role or task, and create new opportunities

Identifying digital skills

Despite its utility in fostering a common understanding of digital capabilities, the Australian Digital Capability Framework (ADCF) falls short in addressing the need for sector-specific digital skills. While it provides a comprehensive overview of broad digital capabilities, sectors are still tasked with identifying and defining specific digital skills required within their respective domains. Like other frameworks, the ADCF offers a high level of understanding (reflecting the abstract nature of frameworks themselves) by providing overarching categories rather than specific, granular details. This abstraction can present challenges for practical implementation, as educators and trainers may struggle to translate these broad capabilities into actionable teaching and assessment strategies or to directly inform curriculum development or training programs. Additionally, learners may find it difficult to understand how to develop and demonstrate these capabilities in real-world contexts. It remains unclear how the Australian Skills Classification (ASC), aligns with the ADCF and other existing frameworks. The ASC focuses on automatically identifying skills in job postings and linking them to specific occupations.

Contextualisation

While a high-level understanding may be a limitation, the capability approach offers strengths worth considering. Benefits include greater flexibility when mapping existing frameworks and greater accommodation of evolving skills and technologies. For instance, Focus Area 1: Information and Data Literacy specific these following capabilities:

- Routinely organise, store, and retrieve digital information

- Routinely organise, store, and retrieve information in a structured and secure digital environment for accessibility for as long as it is needed. e.g. relational databases and spreadsheets

A capability approach outlines that files are to be stored without being tied to specific devices or media, such as CD-ROMs, USBs, or cloud storage. Conversely, the broad nature of a capability approach leads to a further limitation of the ADCF, its lack of contextualization. This is characteristic of any high level, broad framework. Yet, digital literacy demands a nuanced understanding of context. For example, Focus Area 3: Digital Content Creation and the proficiency level of 3 (autonomously solve simple problems) identifies four capabilities (there are 21 in the entire framework). These capabilities and their descriptions provide some guidance of what might be expected of a learner in either two different contexts (e.g. a student or a worker).

- 3.1 Develop digital content
  - Select specific tools to routinely create and edit appropriate digital content
  - Routinely create digital content to a specific type and style
- 3.2 Integrate and modify digital content
- 3.3 Digital copyright and licenses
- 3.4 Create instructions for computers

Yet, while both educational and professional settings may require the same level of proficiency in digital content creation skills, the specific tools, software, and technologies in use can vary greatly and are not specified in the ADCF. Thus, highlighting the importance of supplementing high-level frameworks with more detailed guidance and resources tailored to specific contexts. Educators and trainers may need additional support in developing curriculum and assessment materials that align with the unique requirements of their settings. Similarly, individuals transitioning from education to the workforce may benefit from targeted training programs that focus on the specific digital skills and tools relevant to their chosen field or industry. Practical examples and case studies can illustrate how identified skills manifest in real-world scenarios.

Therefore, while the ADCF offers an opportunity to effectively map existing frameworks, its key limitation in supporting learners' digital capability is the lack of granularity needed to identify actual digital skills. Knudsen et al., (2022) proposed that a strategic next step to support the adoption of the ADCF is the development of an interactive Companion Volume. This volume would contain technology trends sourced from scientific literature and job advertisements, along with digital skills aligned with qualifications. This may, in part, support addressing the long-standing problem of how to include emerging technologies and digital tools in training packages (Hodge & Guthrie, 2019.).

In the meantime, both the education and industry sectors can work towards overcoming this limitation by populating matrices, using the ADCF structure to: map existing frameworks and identify specific digital skills. Ideally, these matrices encompass the context, tools, technologies, and skills. This approach enables educators and trainers to facilitate skill development efforts while leveraging the common understanding provided by the ADCF framework.

Contextualisation can also support equitable pathways. For example, cohorts such as First Nations communities may require digital skills tailored to their cultural context and specific challenges. Offering targeted training programs that address context-specific digital capability needs is essential. The ADCF is an adaptable approach that supports digital skill identification in a way that is inclusive.

The identification of skills

Yet, the identification of digital skills faces yet another challenge. The primary challenge encountered by tertiary and broader educational sectors in adopting and enhancing the ADCF stems from the absence of a standardised method or common definition for describing skills. However, this constraint does not inherently indicate a flaw in the framework itself; rather, it reflects shortcomings in the strategic approach employed. Given the diverse array of methodologies used to define and identify skills, conducting a comprehensive examination of these approaches exceeds the scope of this paper.

The lack of clarity surrounding skill definition and description is further complicated by the divergent perspectives presented in national bodies and reports. VET is primarily associated with providing practical and specific vocational skills, as highlighted in Joyce's research in 2019. Conversely, higher education is often linked with imparting theoretical, soft, critical thinking, and problem-solving skills, as evidenced in the VET Qualifications Reform Survey of 2023. The proposed integration of Vocational Education and Training (VET) and Higher Education (HE) into the tertiary sector will necessitate addressing this multiplicity of understandings of skills.

Strategically, organisations such as the Australian Skills Commission (ASC) strive to identify skills and develop occupational profiles, complementing the efforts of the Australian Bureau of Statistics (ABS). The attainment of a clear stance in Australia regarding a

skills taxonomy, inclusive of skill definition and various approaches to description and categorisation would undoubtedly strengthen the adoption of the Australian Digital Capability Framework (ADCF).

The problem with problem-solving

As a final point, the paper examines an aspect that does not clearly fit into either the challenge or benefit category. As previously discussed, there is a noted absence of a shared understanding of general capabilities. While digital capability is highlighted as essential, 'problem-solving' emerges as another important capability. Emphasising the interconnections between problem-solving and digital capability is noteworthy.

Problem-solving persists across multiple frameworks, including the CSfW. Indeed, problem-solving has been integrated into VET frameworks for nearly three decades, from the Mayer Key Competencies through to Employability Skills (Gibb, 2004). Additionally, problem-solving is a component of PIAAC, an international survey coordinated by the Organisation for Economic Co-operation and Development (OECD), which assesses literacy, numeracy, and digital problem-solving skills in technology-rich environments. Problem-solving is also a significant element in the AQF levels (and demonstration of achievement). In addition, problem-solving is specifically incorporated within Focus Area 5: Technical Proficiency and Problem Solving of the ADCF and also across all levels (alongside autonomy). Understanding the utilisation of problem-solving within diverse frameworks and its role in digital capability is essential.

Conclusion

In conclusion, this paper offers significant insights into the opportunities and challenges faced by the tertiary sector in utilising the Australian Digital Capability Framework ADCF (2023). The framework presents a promising avenue for supporting digital capability development within the tertiary education sector and beyond, by serving as a valuable tool in identifying generic digital capability requirements across various occupations. Despite its abstract nature and some inherent limitations in granularity, the ADCF offers a valuable opportunity to establish a common ground for understanding digital capabilities and skills. Through its adoption, institutions can strengthen curriculum development, and better support learners and the workforce in acquiring both digital capability and accessing pathways. While challenges persist, leveraging the ADCF can pave the way for a more cohesive and unified approach to digital capability development, ultimately benefitting individuals, educational institutions, and the broader society.

References

Ananiadou, K., & Claro, M. (2009). 21st century skills and Competences for new Millennium learners in *OECD countries. OECD Education Working Papers*. https://doi.org/10.1787/218525261154

Australian government. (2023). *Australian Universities Accord interim report. Department of Education.* https://www.education.gov.au/australian-universities-accord/resources/accord-interim-report

Circelli, M., Hall, M., Li, Z., Ong, A., Lim, P., & National Centre for Vocational Education Research. (2022). *Journeying through VET: A case study of foundation skills learners.* NCVER. https://www.ncver.edu.au/__data/assets/pdf_file/0039/9673860/Journeying_through_VET_a_case_study_of_foundation_skills_learners_R.pdf

Department of Education, Employment and Workplace Relations (DEEWR) (2013). *Core skills for work developmental framework.* Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE), Australian Government: Canberra.

Department of Employment and Workplace Relations DEWR (2023). *Core Skills for Work Developmental Framework Department of Employment and Workplace Relations*, Australian Government (dewr.gov.au)

Ferrari, A., & Digcomp, B. (2013). *A framework for developing and understanding digital competence in Europe. IPTS Reports. Luxembourg: European Commission*. doi: http://dx. doi. org/10.2788/52966.

Gibb, J. (2004). *Generic skills in vocational education and training: Research Readings*. National Centre for Vocational Education Research (NCVER): Australian National Training Authority (ANTA).

Golja, T., & Clerke, T. (2020). Towards understanding the development of 21st century capabilities: A scoping review of critical thinking. *ICERI2020 Proceedings.*

Gonski, D., & Shergold, P. (2021). *In the same sentence: Bringing higher and vocational education together [Gonski-Shergold review].* Department of Premier and Cabinet. https://education.nsw.gov.au/about-us/strategies-and-reports/our-reports-and-reviews/review-on-the-nsw-vocational-education-and-training-sector

Hodge, S., & Guthrie, H. (2019). *Moving beyond training packages: First steps.* https://avetra.org.au/resources/Documents/Conference%20Archives/Conference%20Archives%202019/Hodge_Guthrie_Final.pdf

Hodge, S., & Knight, E. (2021). *The best of both worlds? Integrating VET and higher education.* Project Report. National Centre for Vocational Education Research, Auckland, New Zealand. https://www.ncver.edu.au/__data/assets/pdf_file/0043/9669751/The-best-of-both-worlds-Integrating-VET-and-higher-education.pdf

Kift, S., Lloyd, A., Gonzalez, M., & The Australian National University. (2022). *Review of academic competencies & digital capabilities review panel report.* The Australian National University. https://anulib.anu.edu.au/files/guidance/documents/ANU%20Report_SIS_ACDC%20Review%20Final.pdf

Knudsen, E., Mason, C., & Wyndham, M. (2022). Digital Capability for Workforce Skills Evaluating and enhancing the digital readiness of Australia's vocational education and training products Project Background. *NCVER 31st National VET Research Conference 'No Frills' conference.* https://vital.voced.edu.au/vital/access/services/Download/ngv:94329/SOURCE4

Noonan, P., Blagaich, A., Kift, S., Lilly, M., Loble, L., Moore, E., & Persson, M. (2019). *Review of the Australian Qualifications Framework: Final report 2019* [Noonan review]. Department of Education, Canberra.

Holdsworth, S., & Thomas, I. (2021). Competencies or capabilities in the Australian higher education landscape and its implications for the development and delivery of sustainability education. *Higher Education Research & Development, 40*(7), 1466–1481. https://doi.org/10.1080/07294360.2020.1830038

Johnston, N. (2020). The shift towards digital literacy in Australian university libraries: Developing a digital literacy framework. *Journal of the Australian Library and Information Association, 69*(1), 93–101. https://doi.org/10.1080/24750158.2020.1712638

La Trobe University. (n.d.). Digital Literacies Framework: Enabling a Digital Future. https://www.latrobe.edu.au/data/assets/pdf_file/0005/995963/digital-literacies-framework.pdf

Salisbury, F., Hannon, J., & Peasley, J. (2017). Framing the digitally capable university: Digital literacies as shared scholarly and professional practice. Proceedings ASCILITE2017. www.2017conference.ascilite.org/wpcontent/uploads/2017/11/Concise-SALISBURY.pdf

Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education, 5*(1), 1519143. https://doi.org/10.1080/2331186x.2018.1519143

Tully, E., Campbell, S., & Kriewaldt, J. (2020). *The Shift towards Digital Literacy in Australian University Libraries: Developing a Digital Literacy Framework. Journal of Academic Librarianship, 46*(2), 102149. https://doi.org/10.1016/j.acalib.2020.102149

Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2020). Determinants of 21st-century skills and 21st-century digital skills for workers: A systematic literature review. *Sage Open, 10*(1), 2158244019900176. https://doi.org/10.1177/2158244019900176

Weldon, P. (2019). *Changing priorities? The role of general capabilities in the curriculum.* Australian Council for Educational Research (ACER). https://research.acer.edu.au/nswcurriculumreview/3

Wignall, L., Roberts, A., & Scomazzon, J. (2022). *Review of the Australian Core Skills Framework and Digital Literacy Skills Framework and relevant assessment tools. Final report.* Department of Employment and Workplace Relations.

Supporting success: EdTech trial leads to surprising discovery

Dr. Rachel M. Campbell, University of Canberra

Large-Scale Language Models (LLMs) such as OpenAI's ChatGPT and Microsoft's Co-Pilot are at the forefront of our collective higher education (HE) mind. Questions are being asked (and perhaps mistakes are being made) about how we combat the suboptimal use of AI in teaching. Do we embrace AI and teach students how to use it for good? Do we re-evaluate the skills we teach and assess in our learners? How can we support Academic Integrity in this new age of LLMs? I trialled a new EdTech platform with these questions at the heart of my decision.

What transpired was surprising. Through the analytics available, I was able to identify which students may be struggling with assignments and proactively support them ahead of the due date. I could also see HOW students were completing assessments, and at what point in the learning journey they completed work. With these insights and because of how the platform works, I was able to scaffold support for students from the design of the assessment and how it's presented, to proactive and agile support during their assessment journey. The platform certainly promotes and supports academic integrity, but more importantly, it gives educators the opportunity to be proactive in embedding support at each stage of the assessment process, through measurable and reportable analytics.

This presentation will be a reflection from the lecturer's perspective on the semester, discussing the Support for Students legislation, Universities Accord, and the way that both assessment design and educational tools used can support student success.

Creatively navigating Generative Artificial Intelligence in higher education assessment

Tom James, TAFE Queensland

Higher and vocational education institutions are increasingly encountering student assessment submissions produced with the assistance of generative artificial intelligence (GenAI). GenAI is a current and future challenge, it is easily and freely accessible and it is becoming increasingly difficult to detect in a reliable way if GenAI has been used in the production of a student assessment submission (Bearman et al., 2023; Lodge et al., 2023). The capability of GenAI has increased at speed and is now capable of producing passable textual, visual and auditory outputs (Bearman et al., 2024). This development in the capability of GenAI poses a challenge for educators in the creative disciplines. This research looks at the question: What is the validity of current creative assessment designs in higher education in the context of GenAI?

There has already been substantial research into GenAI in higher education, and universities and other higher education institutions have introduced policies that address the use of GenAI. The Tertiary Education Quality and Standards Agency (TEQSA) has published a paper titled Assessment Reform for the Age of Artificial Intelligence (Lodge et al., 2023). Current literature on GenAI in higher education is principally focussed on non-creative disciplines. This research will apply findings from existing scholarship and contextualise and apply this knowledge to assessment in the creative disciplines. The validity of current creative assessment designs in the context of GenAI will also be addressed and it will be determined whether assessments should be redesigned to confirm authorship and prove authenticity. The methodology adopted will be the application and contextualisation of the latest insights from research into the impact of GenAI, on case study examples of assessment designs from the creative disciplines, in particular from the author's field, architecture at a bachelor degree level.

An anticipated outcome is that GenAI compromises some creative assessments in terms of assurance of 'original work' and that these assessments therefore require redesign. This research also expects that some creative assessments will need to be redesigned to demonstrate evaluative judgement (Bearman et al., 2023) and evidence the process (Lodge et al., 2023) rather than the outcome alone. This may lead to a renewed focus on authentic assessment (Butterworth, 2023) and the use of types of assessment such as assessment of practice (McCabe et al., 2023), in-person presentations and design reviews. A focus on authentic assessment and assessing the process especially through in-person interactions may lead to more stimulating assessment designs that are more engaging for students and are more conducive to employability skills. As McCabe et al. (2023) state "the disruption caused by Generative AI is actually an opportunity for us to craft fewer but more meaningful assessments of and for learning". Greater emphasis on authentic assessment in higher education may prove a better fit for students articulating from vocational education, therefore strengthening pathways between the education sectors, and may lead to more graduates being job ready, providing greater access to employment.

References

Bearman, M., Ajjawi, R., Boud, D., Tai, J., & Dawson, P. (2023). *CRADLE Suggests. Assessment and genAI*. Deakin University, Centre for Research in Assessment and Digital Learning. https://doi.org/10.6084/m9.figshare.22494178.v1

Bearman, M., Tai, J., Dawson, P., Boud, D., & Ajjawi, R. (2024). Developing evaluative judgement for a time of generative artificial intelligence. *Assessment & Evaluation in Higher Education*, 1-13. https://doi.org/10.1080/02602938.2024.2335321

Butterworth, R. (2023). AI in creative education: opportunities and challenges for assessment. *JUICE: Journal of Useful Investigations in Creative Education.* https://research.uca.ac.uk/6202/

Lodge, J. M., Howard, S.,& Bearman, M. (2023). Assessment reform for the age of artificial intelligence. *Tertiary Education Quality and Standards Agency.* https://www.teqsa.gov.au/guides-resources/resources/corporate-publications/assessment-reform-age-artificial-intelligence

McCabe, O., Pollard, E., & Powell, S. (2023). Taking Up Space: Can the Ubiquity of Artificial Intelligence Birth a Renaissance for Authentic Assessment? *The SEDA Blog.* https://thesedablog.wordpress.com/2023/11/01/taking-up-space-can-the-ubiquity-of-artificial-intelligence-birth-a-renaissance-for-authentic-assessment/

Contract cheating, Generative AI - Trends, detection and the future

Prashant Singh and Mathew Chacko, Torrens University

As we grapple with increased use of Generative AI in Assessment making globally and we have TEQSA asking for submissions with the providers on how to deal with this, it is poignant to have a look at this area of interest and look to develop the understanding of the same. The presentation has distinct focus on understanding the macro level trends, the regulatory concern and also what can be done, in the interim and share best practice. The presentation will provide a summary of the trends in Contract Cheating, Generative AI, tools used currently by the students and these providers, detection techniques that can be used and hence mitigate in the interim and look at the future of Generative AI and Assessment design.

As the sector is grappling with growing number of instances of Academic Integrity Breaches with the advent of Generative AI and its impact on and the requirement to develop tools to detect the use of and how to develop authentic Assessments to make it harder for the use of Generative AI for Contract Cheating.

TEQSA issued a sector wide alert around Contract Cheating and its implication for service providers and students being blackmailed. We can see a trend of these providers using Gen AI to discount their services and be more aggressive as it is a threat to the traditional model.

The paper/presentation discusses the trends in use of Generative AI in making Assessments. Increasing use of tools of word spinning, translation apps to rephrase and easy access to these by students to write to, formal Assessment structures of Reports and Essays. The tools elaborated upon in the presentation are Quillbot, Deep L, Claude, Spinbot, etc.

It is seen commonly used applications with a paid version; like Grammarly offering Gen AI capability encouraging the sector to be vigilant and look at the Assessment Design and build a pathway towards a systematic approach towards authentic Assessment design and constant review on an ongoing basis.

There are current approaches that can help in mitigating these risks but never full proof and the need to build a future toolkit to mitigate these risks moving forward and that will require collaboration across the sector on an ongoing basis. This will need an approach to learn, adapt and grow approach. The presentation provides the current research from across the sector and overseas around the use of GAI, its purpose for students and faculty and how to best incorporate it without compromising the Academic Integrity principles and learning outcomes for students.

It needs a closer look at instructional design, use of Chat bot and amalgamation of Generative AI in Subjects and Assessment. The continuous advancements in use of this tools will require nimbleness in the approach to pedagogy and learn from a collaborative approach across the Higher Education sector with input and consultation with the regulator on an ongoing basis.

Humanising student engagement

Tom Grice and Ola Pak, TAFE Queensland

This project explores strategies for humanising student engagement within the context of equity and inclusion across vocational and higher education sectors. The aim of this project is to link the evolutionary research and teaching methodologies as a means of enhancing student engagement (Hare, 2017). It is proposed that utilising the key human instincts of cooperation and communication is essential in establishing a humanistic learning environment. This could be confirmed through in-depth interviews with students.

Central to humanising students' experience is an educator's mindset that is aimed at dismantling personal barriers, fostering inclusivity, and nurturing student cooperation across diverse educational landscapes (Tasnim & Ahmed, 2022). By prioritising human-centered approaches, educators cultivate trust, respect, and inclusivity in the classroom environment encouraging students through collaboration rather than competition.

Student confidence is a critical factor in the educational journey. Nurturing it through respect, positive reinforcement and clear guidance is essential. Demystifying assessment processes and criteria plays a crucial role in establishing transparency and reducing student anxiety. Feedback, grounded in empathy and directed towards student improvement, is a foundational element of growth and equity. Through the exploration of research, best practices, and scrutinising student data, this project highlights the importance of humanising student engagement to empower individuals and foster social mobility. By embracing a human-centered approach to education, educators can create an inclusive learning environment that supports diversity and promotes equity.

References

Hare, B. (2017). Survival of the friendliest: Homo sapiens evolved via selection for prosociality. *Annual Review of Psychology, 68*(1), 155-186. https://doi.org/10.1146/annurev-psych-010416-044201

Tasnim, Z., & Ahmed, R. (2022). Rise of Humanistic Education:: Are learners 'humans' or simply 'machines'? *Crossings: A Journal of English Studies, 13*(1), 106-117. https://doi.org/10.59817/cjes.v13i1.23

Creating powerful learning experiences: Context, challenge and community

Dr. Scott Bridges, University of Canberra

The context is familiar across the whole higher education sector: students' capacity to engage with learning is diminishing as they grapple with work, financial, housing and social demands; universities expand the opportunity of study to more diverse cohorts of students who require resource intensive scaffolding; on campus, educators observe rates of personal crises rising and student support needs increasing; meanwhile, industry and government demand "job ready" graduates.

Which leads to the challenge: acknowledging this context and the fact that students triage their commitments, how can educators deliver quality teaching and learning within a shrinking window of student capacity, balancing provision of lower-hurdle experiences with academic rigour, and resisting the blunt use of assessment to compel engagement?

This poster offers a case study of one unit in the University of Canberra's Journalism course which aims to create powerful learning by fostering a community of inquiry (Garrison, Anderson & Archer, 1999). As a first year, first semester unit, 'First Draft' is entirely geared towards generating a positive student experience and building cohort identity within an intensely collaborative environment. The unit flips the traditional course model of front-loading theoretical and historical foundations; instead, engaging students through authentic and exciting experiential learning (Kolb & Kolb, 2018) with critical reflection (Thompson & Pascal, 2012) at the core.

References

Garrison, D., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2), 87–105.

Kolb, A., & Kolb, D. (2018). Eight important things to know about the experiential learning cycle. *The Australian Educational Leader, 40*(3), 8–14.

Thompson, N. & Pascal, J. (2012). Developing critically reflective practice. *Reflective Practice, 13*(2), 311-325.

Pedagogy Before Technology: Exploring the Complex Relationship between Technology Enhanced Learning and Scholarly Practice

Associate Professor Michael A. Cowling, CQUniversity

Before the rise of Generative AI, the primary focus for the Australian national higher education regulator (TEQSA) was clearly on the practice of Scholarship of Teaching and Learning (SoTL), with several guidance notes related to the practice giving institutions advice on how best to tackle this area. However, the concept of scholarly practice can be muddy, and is sometimes (perhaps myopically) conflated with concepts around Educational Technology and Technology Enhanced Learning (TEL).

What is scholarship?

This work focuses on the complex relationship between TEL and SoTL. Using pertinent examples from the Australasian higher education sector, the case is made that scholarly practice is wider than just research and evaluation, and incorporates the sharing of best practices, the development of a scholarly community, and most importantly the ability to introspectively reflect on your scholarly strategies.

Central to this is the three-legged stool analogy, which posits that whilst membership of the academy contains central elements of teaching, research and service, often in different measures (lengths) for different individuals, central to all of these is the concept of scholarship, or the collection and dissemination of knowledge (Cowling, 2021). This means that beyond these elements, scholarship is always a part of what we do, be it as a teaching scholar, research scholar or service scholar, serving in the analogy as the seat of a stool with legs for each element.

Why bother with technology enhanced learning?

Often coupled with this confusion about scholarship however is a second point of confusion relating to the field of TEL. In seeking out new knowledge and ways to disseminate, scholars often find themselves turning to technology, and in doing so conflate TEL and scholarship together, reflected in the inclusion of technology elements in most common SoTL definitions. This is mainly because technology drives so much of the world today, as evidenced by the inclusion of mostly technology companies in the list of largest organisations by market cap, as well as the World Economic Forums' Future of Jobs report featuring many technology skills such as critical thinking and information literacy predominantly (World Economic Forum, 2024). But despite this, it's also clear that technology should not be a driver for scholarly practice, and instead just a tool.

A model for pedagogy before technology practice

This work presents a model for scholarly practice and TEL called the 'Pedagogy before Technology' (PBT) model (Cowling & Birt, 2018). PBT proposes a pedagogy-first approach to integrating technology into the classroom consisting of three steps: 1. Start with the problem; 2. Find a solution; 3. Finally, introduce technology!

In step 1, educators are encouraged to select a difficult classroom problem specific to their context, irrespective of technology limitations, asking the question "What do your students struggle with most?". In step 2, educators are asked to propose a solution, ignoring time and money constraints to fix this problem, again forgetting about technology, with the question being "If you had a magic wand, how would you best set up a classroom / teaching session to solve this problem?". Finally, in step 3, technology is introduced to consider how it might provide pedagogical value for the solution, or deal with time and cost constraints, such as by emulating expensive equipment or making it available at a distance.

Through PBT, educators are asked to put pedagogy first and use technology as a tool to support this pedagogical innovation. Importantly, if technology does not enhance learning, technology does not need to be used in this context, but in many cases technology can provide a benefit to the classroom learning experience for students. This approach also helps resolve the muddiness around TEL and educational practice, showing that the latter should come first, with the former used to support (or enhance) this process.

How are TEL and scholarship connected?

Understanding scholarship, the rise of technology, and the PBT model, provides clues to the parameters of this complex relationship, but underpinning this is the key tenant of scholarship that it incorporates not only the collection of knowledge, but also the dissemination of same. Coined by the author as 'The EdTech Difference', this dissemination component in the area of TEL can sometimes be overlooked but is essential as a way to ensure that TEL remains scholarly. This difference is made up of four key components (Cowling et al., 2022).

First, a clear theoretical framing and a focus on theory, ensuring that as TEL interventions are implemented, they are based on concrete ideas for technology or pedagogy practice and not just 'gut feel' of an educator. Second, a clear methodological rigor, ensuring that as an intervention is conducted, high quality data is collected and analysed to evaluate the intervention and the impact on learning outcomes, engagement or other metrics. Third, the inclusion of the right people to conduct the work, incorporating individuals with educational expertise, technology expertise, and discipline expertise to ensure that the former items are well covered. And finally, in line with PBT, a need for the technology to serve a purpose, and not just being added for technologies sake.

In following these guidelines, more impactful educational technology outputs can be produced, and importantly, demonstrate significant scholarship in TEL, pushing both the field of TEL and the area of higher education forward for the benefit of stakeholders.

References

Cowling, M. (2021, June 20). Scholarship is central to academic practice. *Campus Morning Mail* https://campusmorningmail.com.au/news/scholarship-is-central-to-academic-practice/

Cowling, M. & Birt, J. (2018). Pedagogy before technology: A design-based research approach to enhancing skills development in paramedic science using mixed reality, *Information*, 9(2), 29; https://doi.org/10.3390/info9020029

Cowling, M., Crawford, J., Vallis, C., Middleton, R., & Sim, K. (2022). The EdTech difference: Digitalisation, digital pedagogy, and technology enhanced learning. *Journal of University Teaching and Learning Practice*, 19(2), 1 – 13, https://doi.org/10.53761/1.19.2.1

World Economic Forum (2024). *Future of Job.* https://www.weforum.org/publications/series/future-of-jobs/

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