

RUN LEARNING AND TEACHING AWARDS 2025

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Title: The AI-Powered Pedagogy Toolkit: Enhancing ICT learning and teaching

Abstract: The rapid rise of Generative Artificial Intelligence (GenAI) has created both opportunities and challenges for higher education. In Information and Communication Technology (ICT) education, students and staff expressed excitement but also confusion, raising concerns about academic integrity, over-reliance, and uneven readiness. In response, our cross-institutional team developed the **AI-Powered Pedagogy Toolkit**, launched in early 2025.

The toolkit provides discipline-specific ICT examples, ethical guidelines, prompting strategies, and a GenAI Adoption Model. Grounded in research involving over 100 ICT students across three universities, it incorporates six student personas that capture diverse learner needs. These personas help educators design differentiated activities that match students' confidence and digital fluency, ensuring the toolkit remains adaptable to a wide range of teaching and learning contexts.

The in-class activities enhanced engagement, critical analysis, and submission quality. Student success rates increased by 10 percentage points after in-class activities were introduced. Nationally, the toolkit is hosted on TEQSA's GenAI Hub and received praise from the Australian Computer Society. Internationally, it has been showcased across the Asia-Pacific and downloaded more than 800 times. Two Quartile 1 publications further demonstrate its scholarly and sector-wide contribution. The toolkit now serves as a key reference for academic staff at CQUniversity and beyond.