Making informed decisions about Generative Artificial Intelligence (GenAI) use in teaching and assessment

This resource outlines the practical considerations that educators need to make when deciding if, when and how to use GenAI in teaching and assessment. These decisions need to be aligned to the Charles Sturt University principles for the use of Artificial Intelligence, and consider how the use of GenAI:

- is fit for purpose, in terms of helping to deliver on pedagogical goals and the intended learning outcomes of a subject/course and is appropriate to the learning or assessment task, subject matter, the context, and the developmental stage of the learner,
- does not hinder the creativity, critical thinking, and independent thinking skills of students,
- is underpinned by a process of critical and evidence informed review and appraisal by the human educator,
- is underpinned by a plan to support students to become GenAI literate, for example, by providing students with clear guidelines on what is considered acceptable use, benefits and limitations of GenAI, how to acknowledge GenAI use, how to engage ethically and responsibly with GenAI and how unethical use relates to academic integrity and misconduct, and encouraging students to regularly reflect on and their GenAI augmented learning experiences and adapt their approach,
- takes into consideration data security and effectively managing and safeguarding personal information,
- is underpinned by a commitment to the principles of equity and accessibility,
- is underpinned by a commitment to continuous review and improvement of learning and teaching including through engaging in critical self-reflection, undertaking formal monitoring and evaluation, seeking continuous feedback from students, staff, and other stakeholders, and/or engaging in peer review and calibration with others,
- is informed by a commitment to professional upskilling and keeping up with new developments for example, by reading the literature, engaging in dialogue with colleagues, and engaging in targeted professional development (e.g., online courses, seminars, conferences).

Limitations of GenAI

As educators engage with GenAI in learning and teaching, they need to be highly cognisant of the limitations of GenAI tools and consequently be able to identify and showcase the value proposition of the 'human' educator. The limitations of GenAI to consider:

- **Ethical and Moral Reasoning**: Teaching ethical, moral, and civic values is a complex aspect of education that relies heavily on human judgment and context. These are areas where GenAI may fall short. In this context, the role of the 'human' educator is to provide the contextualisation, mentorship, and role modelling of these ethical, moral, and civic values at the appropriate depth.
- **Critical Thinking and Problem-Solving Skills**: An overreliance on GenAI for answers can limit opportunities to develop critical thinking and problem-solving skills and developing the mental process of exploring, understanding, and responding to complex problems. In this context, the role of the 'human' educator is to design learning and teaching tasks and experiences that engage students in critical and creative thinking, and problem solving.
- **Real-World Learning and Application**: While GenAI has enhanced the fidelity of simulated learning environments, it cannot substitute hands-on learning and application of theory into practice in real-world contexts. The role of the 'human' educator in these real or virtual learning environments including workplaces, is to expertly guide, coach, observe, assess, and supervise learning including the application of knowledge.

- **Curricular Alignment and Depth**: GenAI-generated content may not always align with specific curricular standards or educational objectives, or the depth of explanation or exploration that is required at a particular academic level. The role of the 'human' educator is to provide the alignment and contextualisation and at the appropriate depth to support deep learning.
- **Inclusivity and Student Engagement**: While GenAI can support personalised learning experiences, it is not adept at understanding the individual student and their cultural context and the diverse backgrounds e.g., their learning needs, emotional states, and any accommodations and adjustments that are required. Understanding the complexity of factors that underpin effective learning is crucial for effective teaching. The role of the 'human' educator is to demonstrate understanding of these diverse factors and to deploy context appropriate strategies to maintain focus, motivation, and engagement, and provide mentoring and emotional support that are aligned to the needs of the individual/cohort.
- **Assessment and Feedback:** GenAI systems may not be effective in providing nuanced, constructive feedback on student work in all areas equally and support students to develop their feedback literacy (i.e., skills to seek, use and critically evaluate feedback). In this context, the role of the 'human' educator is to critically appraise what feedback is needed, when and by whom and deploy appropriate feedback strategies including those that support the development of student feedback literacy.
- **Lifelong Learning**: An overreliance on GenAI-enabled learning may impact on how students learn including self-regulation of learning and lifelong learning. The role of the 'human' educator is to implement pedagogically sound strategy and methods that support students to become lifelong learners.
- **Reduced Self-Efficacy**: An overreliance on GenAI tools may lead to a dependency that might reduce students' confidence and self-belief in their abilities. The role of the 'human' educator is to support students to develop their GenAI literacy, with a specific focus on understanding the strengths and limitations of gen AI tools, the role and value add of the 'human' in the human-GenAI relationship, and to regularly reflect on and adjust their approach/interaction with GenAI for learning.

Resources

- Charles Sturt University principles for the use of Artificial Intelligence. https://policy.csu.edu.au/document/view-current.php?id=577
- Exploring, Evaluating and Using AI tools, Monash University. https://www.ai-learning-circle-mon.com/exploring-evaluating-and-using-ai-tools
- Ethical and Evaluative Use of gen AI, Deakin University. https://deakin.libguides.com/generative-AI/ethics-evaluation
- Teaching AI ethics, Leon Furze. https://leonfurze.com/ai-ethics/
- Five principles of effective AI use, University of Technology Sydney. https://lx.uts.edu.au/collections/artificial-intelligence-in-learning-and-teaching/resources/five-principles-for-effective-ethical-use-generative-ai/
- Preparing Students for an AI future, The University of Adelaide. https://guides.library.unisa.edu.au/aiforteachingandlearninginhighered/aifuture