

Artificial Intelligence in Education (AIED) Framework

1. Institutional Approach to Artificial Intelligence in Education

Introduction

As a Higher Education Institute, the Institution pays close attention to the increasing role and implications of Artificial Intelligence (AI) in education and its implications for Learning & Teaching and Scholarship including the impact of AI on academic integrity. The Institution supports the responsible and ethical use of AI tools in Education and provides guidance to staff and students with the *Artificial Intelligence in Education (AIED) framework*.

This framework responds to the institutional strategic goal of providing a **transformative learning experience** for our students, aligning with academic departmental goals, notably to *empower students with responsible and ethical AI skills for the future workplace through an Artificial Intelligence focused pedagogical framework*.

The framework sets the objectives and describes the approach which the Institution plans to take to achieve the strategic objective. As a Higher Education provider within the Australian Higher Education sector, the Institution aims to provide an industry-focused education, with courses developing contemporary knowledge and skills needed by students for professional success in their fields of study as stipulated in the [Learning and Teaching Policy](#).

Through the AIED framework, the Institution intends to find a balance between leveraging AI's benefits and mitigating its risks. This involves developing strategies to detect unauthorised AI-assisted content generation, ensuring academic integrity while embracing AI's opportunities to enrich classroom learning and assessments. Moreover, the framework serves as a foundation for initiatives to embed inclusivity and diversity into design and delivery, recognising the potential for AI to widen the digital divide, ICMS are committed to ensuring equitable access to AI tools and skills across its diverse cohorts of students.

Overall, the purpose of the framework is to capture the institutional approach and to provide guidance for students, lecturers and academic leaders in understanding, using and responding to AI tools at ICMS. It aims to outline a vision for the responsible, ethical and inclusive application of AI to enhance learning and teaching and supporting improved educational outcomes.

Definitions and Ethical Considerations

- **Artificial Intelligence (AI)**

Artificial Intelligence, as defined by the European Commission (2018), encompasses systems that demonstrate intelligent behaviour by autonomously analysing their environment and undertaking actions to achieve specific objectives. These AI-based systems, powered by advanced technologies such as machine learning and neural networks, can autonomously generate, transform, and produce a broad array of content including, text, images, artwork, music, and programming code. In the context of our rapidly digitizing society, students will likely use AI tools in their future professional lives. Therefore, they should be given opportunities to integrate these tools into their education responsibly and ethically.

- **Generative Artificial Intelligence**

Generative AI is a subset of artificial intelligence that focuses on creating new data samples that resemble real-world data, as described by the Information Technology Gartner Glossary (2023). It involves deep-learning models that can take raw data and "learn" to generate statistically probable outputs when prompted. These models encode a simplified representation of their training data and draw from it to create new work that's similar, but not identical, to the original data. Several types of generative AI technologies have gained prominence in recent years, each with distinct applications and implications (Mansinghka and Saboo, 2023).

- **Artificial Intelligence and Ethical Considerations in Higher Education**

As the use of AI increasingly permeates various sectors, including education and research, it becomes essential to address the ethical considerations inherent in its use. Fundamentally, the responsible use of AI must align with principles of fairness, transparency, and respect for human autonomy. In an ideal world, AI systems must be designed and deployed to avoid bias and discrimination, ensure transparency in their decision-making processes, and protect individual privacy, autonomy and data-protection (given AI's reliance on large datasets).

Despite these ideals, AI-generated outputs can sometimes be biased and inaccurate. It is therefore important to incorporate education on the ethical and responsible use of AI tools into the curriculum and in training for Lecturers, thereby reducing the susceptibility of students engaging in inappropriate AI use which can constitute academic misconduct.

The AIED Framework has been informed by the Australian Academic Integrity Network (AAIN), the European Network for Academic Integrity (ENAI) based on their [Recommendations on the ethical use of Artificial Intelligence in Education](#), contemporary literature on the topic and the TEQSA guiding document [TEQSA Assessment-reform-artificial-intelligence 2023](#).

Given the rapid developments globally, new regulations, which may find adoption in Australia will be watched, such as the EU Artificial Intelligence Act which was approved via legislation on March 13, 2024. It established a common regulatory and legal framework for the use of AI in the EU. This Act classifies AI systems into different risk categories, from unacceptable risk, high risk, limited risk, minimal risk and general purpose AI. Any high-risk AI systems used in Education must comply with strict requirements around quality, transparency, human oversight, and security.

2. Artificial Intelligence in Education (AIED) Framework

The AIED Framework guides the Institution towards the responsible and effective integration of AI technologies for educational purposes. This framework is structured around five elements which are interconnected:

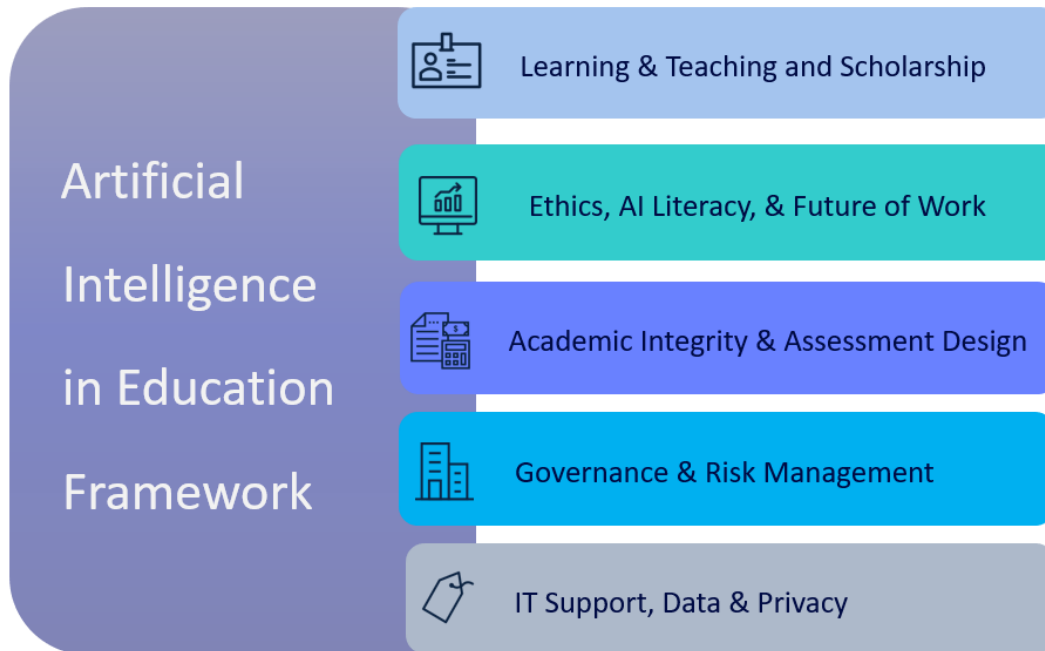


Figure 1: AIED Framework ICMS

Learning & Teaching and Scholarship: This element considers the enhancement of learning & teaching and scholarly activities through AI. The changing role of teachers, graduate and digital capabilities, the human in the loop and opportunities for scholarly work on AI are described as core aspects.

AI-Literacy and the Future of Work: This element emphasises ethical use of AI at the institution adhering to fairness, transparency, and human autonomy. It involves educating students and staff about AI, fostering an understanding of AI principles, applications, and implications in education and for the future of work.

Academic Integrity and Assessments: This element underscores the importance of upholding academic integrity in an AI-enhanced learning environment and ensures alignment with regulatory requirements.

Governance and Risk Management: This part of the framework describes how the Institution ensures implementation and oversight in decision making, continuous monitoring of the impact of AI tools and how risks are managed.

IT Support, Data & Privacy: The final element covers strategies focused on IT support, data and privacy protection, careful selection of AI tools to be used in education and ensuring alignment between academic and IT departments guided by institutional policies and institutional frameworks.

Each element of the AIED Framework is explained in the following sections. Detailed guidelines are provided separately for each element to support staff and students in the implementation of the framework.

2.1 Learning & Teaching and Scholarship

This element considers the enhancement of learning & teaching and scholarly activities through AI. The changing role of teachers, graduate and digital capabilities, and the ‘human in the loop’ are described as the core aspects.

Learning & Teaching and artificial Intelligence

The integration of AI into learning & teaching is aimed at enhancing the educational experience in an impactful way with the intention to increase student engagement and their learning outcomes. The institution likes to explore how the use of AI tools can also reduce the administrative burden on academic staff to allow them to focus more on teaching and mentoring students and less on administrative duties.

The implementation of the framework into learning & teaching responds to the risk of a digital divide among students with AI on both access and skills. A review of ICMS Graduate Capabilities and the development of AI literacies within these are therefore included in the framework.

ICMS Graduate Capabilities

A set of seven Graduate Capabilities have been formulated at the institution to which all qualifications have been constructively aligned. It is expected that all graduates will demonstrate professional expertise, agile leadership, innovative problem solving, and skilled collaboration. They will be equipped with technology and information literacy, embody global citizenship, and practice independent self-management. Key concepts include disciplinary knowledge, authentic leadership, integrative intelligence, digital creativity, AI literacy, sustainable practices, effective communication, and continuous self-learning, equipping them to excel across professions and disciplines.

Outcomes regarding AI literacy have been integrated into Technology and Information Literacy, to include specific concepts required to responsibly and effectively use AI in various contexts.

Capability	Graduates of ICMS courses will have:	Key concepts (ICMS students will demonstrate):
Professional Expertise	The skills and knowledge necessary to demonstrate confidence, competence and innovation in their specific profession and across disciplines.	<ul style="list-style-type: none"> • Disciplinary knowledge • Workplace confidence and competence • Interdisciplinary capabilities • Innovative practices • Transferable skills and knowledge • Entrepreneurial skills
Agile Leadership	The capability to initiate, embrace and lead innovation and change, as well as engaging and enabling others to do so.	<ul style="list-style-type: none"> • Authentic leadership • Resilience and adaptability • Vision • Interpersonal skills • Cross-cultural leadership • Groups, teams and systems awareness
Innovative Problem Solving	Initiative and enterprise skills that contribute to innovative problem solving of dynamic, real world challenges.	<ul style="list-style-type: none"> • Integrative intelligence • Initiative and enterprise • Effective and creative responses to problems • Collaborative creativity and innovation, and complex problem solving underpinned by transdisciplinarity

Capability	Graduates of ICMS courses will have:	Key concepts (ICMS students will demonstrate):
Technology and Information Literacy	Up to date technology skills to interact and collaborate with others in a rapidly changing world, with the ability to gather, interpret and evaluate relevant information, including through the use of AI tools in order to develop accurate judgements in an ethical, responsible and practical manner.	<ul style="list-style-type: none"> • Information, media and data literacy • Digital creativity, problem solving and innovation • ICT proficiency and productivity, • AI enhanced data management and critical evaluation thereof • Professional digital identity, ethics, AI ethics, responsible application and digital wellbeing • Application of AI affordances in professional practice • Digital networking capabilities and collaboration with technology
Global Citizenship	The skills to work productively and collaboratively in diverse global environments and to make ethical and sustainable decisions that consider the impact on others across boundaries.	<ul style="list-style-type: none"> • Sustainable practices • Intercultural awareness • Personal integrity • A global outlook • Ethical decision making • Exchange values and perspectives • Act across cultures and boundaries • Inclusivity
Skilled Collaboration	The ability to work effectively within teams from diverse backgrounds, display effective leadership behaviours and effectively communicate knowledge and information to deliver measurable outcomes.	<ul style="list-style-type: none"> • Effective communication • An ability to listen without judgement • Human interaction and emotional intelligence • Negotiation skills • Inclusive teamwork • Human and machine collaboration
Independent Self-management	A sense of self-awareness and self-belief to develop a personal culture of continuous self-directed learning, enabling ongoing personal and professional development.	<ul style="list-style-type: none"> • Reflective skills • Autonomy • Self-regulation • Lifelong professional learning and relearning • Goal-orientation

Role of lecturers

With a wider use of AI tools at the institution, the role of lecturers is evolving to incorporate these technologies into their teaching practices. While deep disciplinary expertise and its real-world application remains essential, the ability to integrate new AI technology is becoming more important. Lecturers, therefore, need to develop AI literacy to effectively integrate AI into learning activities, lesson plans and assessment designs whilst at the same time infusing their human skills. The qualities of human teachers such as emotional intelligence, creativity and critical thinking are indispensable for students' achievement of learning outcomes (Chan and Tsi, 2023). Further into the future, teachers may collaborate with AI tutors to combine human with machine intelligence to further enrich the learning experience.

The institution aims to use AI as an assistive tool for a rich and human centred teaching approach which allows lecturers to function as facilitators of the learning process and mentors preparing students for the future workplace. Emphasising ethical values will become increasingly important as Lecturers guide

students through dilemmas using authentic workplace cases to debate the limitations and ethical implications of AI tools.

Digital capabilities

The digital capabilities framework, published by JISC (2023) describes the ‘six elements of digital capabilities’ and the role of Lecturers for developing these. Given that AI tools are inherently digital and require a robust understanding of technology, data privacy and security, this digital capability framework is fit for purpose. Moreover, developing capability in digital creation, problem-solving, and innovation are also important for customising AI-based learning materials. Similarly, information, data, and media literacies are essential for interpreting AI-generated data and content.

Underpinned by the JISC framework and to assist lecturers in fulfilling their role effectively, the institution will provide professional development opportunities which seek to explore the affordances of AI tools in education in areas such as developing lesson plans, customising learning material, possibly using AI agents for brainstorming of ideas, and designing engaging class activities. These efforts aim to reduce the burden of administrative tasks on lecturers, allowing them to dedicate more time to their human and mentorship roles.

Human in the Loop

The concept of Human in the Loop (HITL) plays an important role in ensuring that artificial intelligence systems operate under human guidance and oversight. HITL is fundamental in fields such as machine learning where human intervention is required to ensure responsible AI usage throughout the AI’s decision-making process. For instance, interventions are built into processes so that humans can validate, interpret and refine AI outputs.

Transposing this framework into higher education, students and lecturers are required to remain actively engaged in the learning and teaching process, alongside AI. This engagement is not passive, it requires a critical and evaluative approach across all stages to ensure responsible AI usage. For instance, if and when students use generative AI in learning, the HITL model requires critical assessment of accuracy and relevance of AI-generated output as well as a critical assessment of the input prompts, aligned to learning outcomes.

Similarly, lecturers are tasked with incorporating AI tools in a way that complements the curriculum whilst developing a critical understanding of these technologies. Lecturers must guide students in understanding the capabilities and limitations of AI, ensuring that the educational use of AI enhances learning outcomes without compromising the integrity of academic work. Examples of this are included in the AI-Literacy learning pathways and the guides for staff and students. This might include activities or assessments where students are required to validate the information provided by AI against subject specific scholarly resources or to apply AI generated output in practical, real-world contexts.

Aspects of social well being can be considered under the HITL concept, whereby AI tools can be used to:

- Promote collaborative learning, when student work together to analyse, interpret and critically discuss AI-generated data or results;
- Foster a sense of agency and empowerment, when students are actively involved in HITL, to steer their own learning;

- Engage in feedback loops between the students and lecturers when AI tools are integrated to support students in achieving their goals and personal or professional development objectives;
- Apply AI generated output responsibly in a real-world context when students learn about implications and applications relevant for their personal and professional life.

In research, if AI is increasingly used in support of writing journal articles, human involvement is almost certainly required in the editing and review process, otherwise there is the risk that AI simply ‘parrots back’ what is already available on the internet. (Crawford, Allen & Lodge, 2024)

By embedding the HITL model within practices at ICMS, the power of AI can be used to promote critical thinking, enhance learning experiences, and prepare students for a future where HITL and the critical use of AI will be integral to their professional and everyday life.

Scholarship and artificial intelligence

AI is changing the way scholarly activities and research are conducted, too. For example, the traditionally arduous task of literature review can now be done in minutes instead of weeks. AI can search, curate, summarise, identify research gaps, generate drafts and even give feedback on drafts (Jones, 2023). More importantly, AI is a powerful tool for data analysis. Not only can it process large volumes of complex, quantitative data, it has the capability to sift through unstructured qualitative data, such as customer reviews and interview transcripts, uncovering patterns that manual processes cannot easily identify (Cooper, 2023). However, the use of AI tools comes with limitations and risks. The following factors should be considered before deciding whether or not to engage AI and how

- Compliance - Policies of funding bodies, collaborators and prospective dissemination outlets – some publishers, for example, have banned the use of generative AI tools (Kingsley, 2023).
- Ethics – The current National Statement on Ethical Conduct in Human Research provides little guidance on the use of AI in human research. The Australian Government, however, has published an [Artificial Intelligence Ethics Framework](#) that sets out eight ethics principles. They include data privacy and security, and transparency and responsible disclosure.
- Bias – The data used by AI tools can be inaccurate or misleading, which is detrimental to the integrity and trustworthiness of the research.
- Copyright and intellectual property – Content created by AI is not protected by copyright and may infringe on the rights of others (Flinders University, 2023).

Staff members are encouraged to consult with the Associate Dean (Scholarship) before adopting any AI tools in their scholarly work or research. Separate guidelines are provided for the appropriate acknowledgement of AI tools should they be utilised.

2.2 Ethics, AI-Literacy and the Future of Work

This section covers several aspects of AI in education, encompassing not only the ethical use of AI tools but also the development of AI literacy, staff and student training, and relevance of the framework for the AI-influenced future workforce.

Ethical use of AI tools

When using AI tools in Education, the institution aims to ensure ethical as well as effective engagement with the technology. Since the use of AI tools in Education can raise ethical issues, which include aspects

of fairness, accountability, bias, autonomy, agency and inclusion, staff and students need to develop awareness and understanding.

In support of this, an ICMS AI Literacy Pathway helps students develop their awareness of when and how different AI applications can be used ethically and legitimately in the context of their studies. Likewise, the Pathway helps lecturers teach the ethical and responsible use of artificial intelligence tools to students.

AI literacy

A frequently cited definition of AI literacy was developed by Long and Magerko (2020, p. 2), who define it as “a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace”. They established that basic AI literacy education has focused on understanding AI and critically reflecting on AI outcomes. Programming skills or computer science knowledge are not usually considered learning objectives of AI literacy, nor required qualifications.

Adapted from Ng et al., (2021) and Hillier (2023) AI literacy entails broadly five areas of competency summarised below.

- 1. Knowledge of AI affordances, capabilities and limitations – effective engagement**

AI literacy includes understanding fundamental AI concepts, skills, and knowledge without prior expertise. Learners should grasp the basic techniques and concepts behind AI in various products and services, focusing on how these technologies function and their capabilities and limitations for their academic work and future career.

- 2. Ethical and responsible use of AI tools - embedded at course Level**

This aspect emphasises the importance of using AI concepts ethically in different contexts and applications. Learners should understand AI applications’ impact on our lives, including ethical considerations surrounding AI technologies. The focus is on human-centered ethical application of AI concepts.

- 3. Effective collaboration - human / AI collaboration**

AI literacy involves engaging learners in higher-order thinking activities that include collaboration. This involves extending AI literacy to competencies that enable individuals to critically evaluate AI technologies and effectively communicate and collaborate with AI, thus enhancing their scientific and technological knowledge for practical problem-solving.

- 4. Evaluation of AI output - criticality**

Evaluation of AI output is part of the higher cognitive levels in Bloom’s Taxonomy related to AI literacy. It involves analysing, evaluating, and creating AI, where learners apply their understanding to critically assess AI technologies and their outputs, understanding their implications and limitations.

- 5. Using AI in practice – discipline specific and industry focussed**

This aspect is about integrating AI literacy into the institutions’ curricula, where learners use discipline specific tools like hardware, software, and intelligent agents to develop AI concepts. It

involves hands-on activities and real-world projects where learners apply AI knowledge and skills to solve real-world problems, suitable for various education levels.

ICMS is committed to building AI literacy in its staff and students in accordance with the five areas of competency above. AI training initiatives have been developed in house to meet the needs of both these audiences. While there are common elements in the training, such as prompting techniques, critical evaluation of AI outputs and the practical and ethical use of AI, the focus diverges based on the specific requirements of staff and students.

- **Staff AI literacy development**

Staff are equipped with the necessary resources to use AI tools ethically across teaching, research and administrative tasks. This includes understanding the varied applications across various academic disciplines. To facilitate this, educational resources, policies, procedures and supporting guidelines are accessible to staff during Faculty Days and via an AI Literacy Learning Pathway available through the ICMS Learning and Teaching Hub.

Additionally, the institution emphasises the importance of regular and ongoing engagement and dialogue between academic staff and students in what is a rapidly evolving space. To do this, ICMS have created a cross disciplinary Community of Practice which is governed by this framework and acts as a platform for learning, discussion and application of AI into the ICMS context.

- **Student AI literacy development**

The Institution fosters AI literacy development among its students, mirroring its efforts in staff development. A self-study AI literacy module, including tailored resources and interactive modules, is available through Moodle. This mini module helps students understand AI's diverse applications, and responsible use, complying with institutional policies, procedures and use of AI guidelines. Classroom integration of AI tools allows practical engagement and critical reflection, enhancing students' understanding of the tools implications and potential in their study fields. Additionally, AI is incorporated into selected assessments with clear guidelines provided on subject sites, ensuring responsible and ethical use. These measures equip students with necessary AI skills and an ethical framework, preparing them for a future where AI is integral in academic and professional contexts.

Future of work and employability

The World Economic Forum, Future of Jobs Report 2023 suggests that AI will augment rather than replace human tasks, with a consensus that AI will enhance human performance. Despite predictions, such as Golman Sachs estimating 300 million jobs being automated by AI, there's a strong belief in AI's significant potential to create jobs and develop new skills. Key insights from the Future of Jobs Report include AI being a net job creator, with nearly half of surveyed businesses expecting job creation due to AI adoption, particularly in fields like data science and big data. Only specific tasks like information gathering and basic decision-making might see full automation, while leadership and creative skills remain predominantly human-driven.

In light of these developments, this framework contributes to preparing ICMS students for both academic success and employability for their future workplaces. By embedding AI literacy skills within the curriculum, the framework seeks to bridge the gap between current academic preparation and the

skill sets needed in a future job market. This requires collaboration with industry partners, lecturers working in industry and to seek their input for the design of subjects and assessments. Such partnerships enable a better understanding of the shifting market demands, allowing for a responsive curriculum.

2.3 Academic Integrity and Assessment Design

Academic integrity has been defined as “compliance with ethical and professional principles, standards, practices, and a consistent system of values that serves as guidance for making decisions and taking actions in education, research and scholarship” (Tauginienė et al. 2018, p. 8).

Artificial intelligence tools are expected to continue to be released into the public domain and have become increasingly easier to access for use at no (or small) cost. In this fast developing and constantly changing technology context, Higher Education providers are paying close attention to the increasing role and implications of Artificial Intelligence in academic integrity.

There have been substantial increases in the use of AI tools available to students, especially in the forms of generative artificial intelligence and in services for contract cheating. The latest version of the Institution’s Academic Integrity Policy and related procedures consider the unauthorised use of AI platforms (such as Generative Pre-trained Transformers – GPTs) to fabricate information.

While the use of AI tools in creating assessments may be permitted under specific conditions outlined in the assessment brief, it is imperative that the submissions reflect the student's original work. This means that all submitted assignments must demonstrate the student's mastery of the subject's learning outcomes, showcasing their acquired knowledge and skills. AI can serve as a supportive tool in this process, provided its use is properly acknowledged and referenced according to the Academic Integrity Policy. It is crucial to understand that submissions must be the result of the student's intellectual effort; falsely claiming AI-generated work as one's own constitutes academic misconduct and may result in penalties. The integrity of academic work hinges on the principle that all submissions are genuinely reflective of the student's abilities and learning.

The concept of Unauthorised Content Generation (UCG) highlights the risk of students using undeclared AI tools for academic work, which can be considered a form of academic misconduct. The difficulty in distinguishing between AI-generated and human-produced content further exacerbates this issue.

Given the variation in acceptability of AI usage across disciplines, institutions, cultures, and regions, the Institution has set out to establish clear guidelines and policies on the use of AI tools in academic work.

These separate guidelines advise students when the use of AI tools is restricted, describe the acceptable and ethical use of AI in the Institutions’ specific context and include questions which students can use to self-evaluate their engagement with the AI tools.

2.3.1 Principles for Assessment design

The Institution aligns with good sector practices and guidance provided by the regulator, TEQSA, which provides two principles and five propositions for the use of AI tools in assessments. The two principles entail:

1. **Equipping students for an AI-driven society:** This principle highlights the need for assessments and learning experiences to prepare students for ethical and active participation in a world where AI is prevalent. It emphasises understanding AI's ethics, limitations, biases, and implications, integrating these aspects into education to inform assessment design thoughtfully.
2. **Trustworthy judgements in AI-assessments:** This focuses on the necessity of multiple, inclusive, and contextualised approaches to assessment. Recognising that no single assessment type can fully address the varied uses of AI, it advocates for triangulated, diverse assessments to ensure trustworthiness and inclusivity in evaluating student learning.

The five propositions to guide assessment are summarised below and contextualized for the Institution.

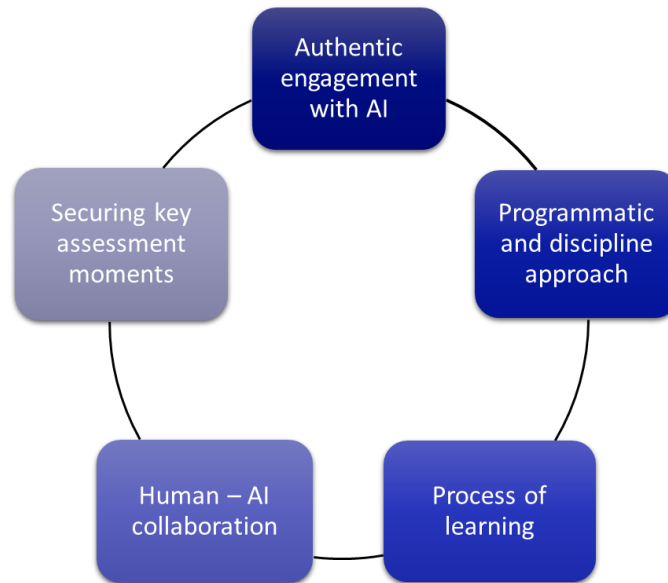


Figure 2: Propositions for Assessments with AI

Whilst TEQSA advocates for inclusive, contextualised, and trustworthy assessments that prepare students for an AI-infused world, the challenge in meeting this call to arms is the inherent difficulty in designing authentic yet trustworthy assessment tasks where AI is being used by students at home in non-invigilated conditions. In these assessments the achievement of learning outcomes can be measured, but the question is whether they were attained by the learners or by AI? Relying on traditional assessment types and without re-thinking the assessment designs, it is difficult to know, even if AI detection tools are used.

On the flip side, assuring absolute integrity through the invigilation of all assessments does not provide students with opportunities for authentic engagement with AI and for them to be prepared for what the regulator describes as an AI-infused world.

To achieve a balance ICMS have taken on the dual lane approach developed originally by Sydney University (Liu, 2023) which aims to categorise assessment designs into two lanes, which at the institution is referred to as track 1 (secured) and track 2 (open).

- **'Track 1' assessments:** These are secured assessments and AI is typically not permitted. They are designed to ensure students have mastered the skills and knowledge the course requires. They are supervised and invigilated, designed for the 'assessment of learning'.

Engaging with AI tools will be treated as a breach of academic integrity in these assessments unless the effective and ethical use of the AI tool is purposefully assessed as a learning outcome and must be assessed in a secured assessment.

- **'Track 2' assessments:** These are not invigilated in the same way as Track 1; they are open and AI is permitted. They motivate students to learn and engage responsibly with AI. They focus on productive and responsible participation in an AI-integrated society. There are types and ways AI is permitted in these assessments which is made clear through the assessment instructions:
 - Permitted AI types: Guidelines about the AI tool and how the use of the tool is permitted is provided to students. Any unauthorised use of an AI tool will be treated as a breach of academic integrity.
 - Permitted and supported AI ways: The use of AI tools is permitted and supported in specific ways and for parts of the assessments. Other ways of using AI tools, not specified in the assessment brief and not permitted will be treated as a breach of academic integrity.

2.3.2 Considerations for using AI in assessment tasks

When considering the permission or restriction on the use of AI for an assessment task, it is important to consider the following factors:

- **Educational reasoning:** it is important to assess the pedagogical objectives of the task and consider how the use of AI may align or misalign with those objectives. Some tasks may require students to demonstrate their understanding, critical thinking skills, or ability to apply knowledge independently. In such cases, relying heavily on AI could undermine the intended learning outcomes.
- **The nature of the task:** if the task aims to assess a student's writing proficiency, using generative AI to produce the written content would defeat the purpose of evaluating their individual writing skills. In contrast, if the task is focused on exploring AI capabilities or understanding its applications, the use of generative AI might be appropriate and aligned with the learning objectives.
- **The function of the task:** if the task aims to assess a student's mastery of specific concepts or their ability to solve complex problems, relying on AI could potentially hinder the accurate evaluation of their skills and knowledge.

Assessment design

This approach of thinking about assessment as track 1 or track 2 fits well with TEQSA's five propositions. Each of their propositions can be categorised into either track 1 or 2. There are examples of how these are adapted to an ICMS context in the table below.

Table 1: Assessments with AI in the ICMS context

TRACK 1 – AI NOT PERMITTED / SECURED		
Securing key assessment moments	<p>This involves identifying and securing key moments in the course of study where understanding student capabilities without AI is crucial. It aims to ensure that students awarded with the qualification have truly achieved the course learning outcomes, focusing on specific critical points within a program.</p> <p>Secured assessments may need to assess the effective and ethical use of AI tools if this is a learning outcome that must be assessed securely.</p>	<p>Identify a key assessment (towards the completion of the course, <u>including nested courses</u>) that provide an assurance of learning across the CLOs which does not permit the use of AI, for example in the capstone subject and which includes an invigilated assessment or 'secured' in-person/in-class demonstration.</p> <p>ICMS aligns with professional body accreditation requirements (CA/CPA and ACS) in regards to the permitted or not permitted use of AI in secured assessments.</p>
TRACK 2 – AI PERMITTED / OPEN		
Proposition	Description	Adapted to ICMS context
Authentic engagement with AI	This supports critical analysis of AI's role in work and study, fostering responsible and ethical AI use in assessments that are authentic to the task and discipline. This proposition aims to integrate AI into learning in a way that is meaningful and aligned with course learning outcomes (CLO), making it an integral part of student learning.	For each course and subject, relevant disciplinary and industry-ready capabilities are identified. These are embedded within subjects learning outcomes (SLO) and mapped to CLO's. Example: Brand Management using a logo and packaging design AI tool. Ethics and legal reflection on the tool towards the brand building.
Programmatic and discipline approach	Entails assessment design to encompass entire courses (including nested qualifications) beyond subject level, integrating various methods, tasks and feedback loops. This proposition aims to support judgments about student progress and attainment, ensuring trustworthiness and appropriate credentialing in the age of generative AI.	Using the curriculum map and assessment matrix for each course, a number of selected assessments across the program aim to develop AI literacy in which students document their progress within a learning portfolio when successfully passed.
The process of learning	This emphasises assessing the learning process, including critical thinking and ethical decision-making, to understand	The assessment design involves steps where students record their learning process and the evidence leading up to

	students' competencies. It addresses the challenge of differentiating human-created work from AI-generated content in assessments, aiming to gather evidence of students' critical engagement with AI and on their learning process.	their final submission. This includes noting the prompts used and how the AI output was integrated into their work. For example: students might use GenAI for idea generation, then critically evaluate these ideas using theories and models covered in the subject to develop an enhanced events strategy proposal.
Human AI collaboration	This focuses on designing assessments that facilitate quality collaborative work between students and AI, outlining acceptable ways for such collaboration. The goal is to encourage students to articulate and reflect on the role of AI in collaborative work, enhancing inclusivity and defining clear boundaries for AI.	The assessment design requires students to reflect on their collaboration with the AI tool for their assessment. This can include any discipline relevant aspects such as biases, limitations in the output, inaccuracies and how the tool has enhanced their learning and influenced their subject matter confidence.

Guidelines on using the above propositions in curriculum planning and assessment design are provided to academic staff on the L&T Hub.

Track 2 assessments

Once approved by the lecturer in consultation with the program manager, and when AI tools are permitted in assessments as specified in the assessment briefs, proper acknowledgment is required. When developing track 2 assessments, it is important to consider what is appropriate and inappropriate use and to document this in the assessment brief clearly.

Appropriate use

Several instances are illustrated below. With all these instances, the use of AI should complement and enhance the learning process, not replace the student's own critical thinking and creativity.

1. **For revision and learning:** AI is appropriate for generating practice quizzes for self-testing, summarising topics for knowledge building, simulating scenarios for application, creating synthetic data for practising, and assisting in learning and revision. It can also be used for developing reflection and evaluation skills, where students analyse AI outputs and enhance their understanding of the subject.
2. **For refining writing:** Subject to assessment briefs and grading rubrics, AI can be used for grammar and spelling checks, style and tone suggestions, clarity and coherence improvement, vocabulary enhancement, plagiarism detection, proofreading, and self-marking assignments. In this instance usage is confined to refining writing, not generating ideas. See guidance for ELICOS students in point 5.
3. **For brainstorming and developing ideas:** AI can be used in the initial stages of the assessment for brainstorming and idea generation, and checking ideas. This level is suitable for assessments

where students need to demonstrate their critical thinking and writing skills, such as constructing their own essays and reports.

4. **If referenced and acknowledged:** AI-generated material should be properly acknowledged following APA style 7th edition, and copyright details for any images, audio files, or codes generated by AI should be checked and referenced appropriately.
5. **For ELICOS students:** AI tools can be used for generating writing prompts, conversing with chatbots for language practice, using speech recognition for pronunciation feedback, text-to-speech for listening skills, analysing texts for writing feedback, and administering language proficiency mock tests, offering objective evaluation and feedback on English language skills.

Inappropriate use

Several instances are illustrated below.

1. **Not permitted:** Using AI when it's explicitly forbidden in the assessment brief constitutes academic misconduct.
2. **Writing the assessments, code, or creating artwork:** It is inappropriate to use AI for generating complete answers, writing assessments, coding, or creating artwork without proper acknowledgment or attribution. Relying solely on AI undermines the development of critical thinking skills and may misrepresent the students' abilities, leading to ethical concerns and a lack of genuine reflection of the students' own effort and creativity.
3. **Doing research for the assessments:** Using AI to generate text with fabricated sources, as a database, or to complete research papers without proper acknowledging original sources.
4. **AI materials are not declared:** Failing to acknowledge AI-generated material used in assessments may be considered academic misconduct.
5. **For ELICOS students:** It is inappropriate for students to use AI for language translation in assessments, sentence or phrases completion, or text summarisation in assessments, as these practices can avoid genuine language learning and skill development.

Inappropriate use of artificial intelligence may lead to academic integrity breaches, including plagiarism, fabrication or falsification of content, collusion, contract cheating, or fraud etc. as per the [Academic Integrity Policy](#) and related [procedures](#). Moreover, it also falls into a distinct category of academic breach of its own, called inappropriate use of generative AI.

Acknowledgement of AI tools

ICMS follows the APA 7th edition style guide on how to acknowledge AI tools for in-text referencing and the reference list. The institutional style guide is made available to all staff and students on Moodle and through the Student Success Centre.

Detection of inappropriate use of AI in assessments

Students are provided clear guidelines on the appropriate and inappropriate use of AI tools and how the use of AI tools must be acknowledged in their work when permitted. Consequently, the detection of the unauthorised or undeclared use of AI tools remains critical for maintaining academic integrity and the

institutions commitment to academic excellence. The institution deploys the Turnitin AI detection tools integrated into the moodle assessment settings for assessments submitted through the subject site. For secured assessments on track 1, invigilation measures are used in a physical and/or virtual assessment environment, potentially through browser lockdowns or proctoring software. Online proctoring and invigilation follows a defined process and ensures procedural fairness.

The management of suspected academic integrity breaches for inappropriate use of AI follows the academic integrity policy and procedures.

What could be next? Looking ahead to a more holistic learning future

Creating a robust and forward-looking framework for integrating AI into assessments unifies educators and students in a comprehensive approach to achieving learning outcomes in an AI world. However, looking into the future and the likely rapid transformation of AI technologies and expected replication of tasks traditionally performed by humans, the questions arise as to whether universities are cultivating the right skills and qualities in students? Do the Graduate Capabilities and Course Learning Outcomes embrace all aspects of the human experience and not just cognitive knowledge, skills and their application – the ones more likely to be replicated by AI technologies?

A broader perspective on education is required that equally incorporates functional and effective dimensions, nurturing the full spectrum of human capabilities, preparing students not just for the workforce but for a purposeful and engaged life that may contribute to solving some of the world's bigger problems.

To achieve this, course learning outcomes across the institutions' programs must be reviewed to include essential future human skills and aptitudes. These should be assessed through 'powerful' assessments where AI plays an important role in their completion but is not the primary focus. Instead, the emphasis is on developing human skills, ensuring that the rubrics are aligned with the cultivation of capabilities that prepare students for a rapidly evolving, AI-integrated future.

Envisioning ICMS' role in this changing landscape, it becomes apparent that the institutions should not only equip students with AI 'superpowers' but also develop in them a sense of human responsibility to use these capabilities for positive impact. This can involve guiding students on how to leverage AI in addressing some of the world's most important challenges, such as those laid out in the Sustainable Development Goals (SDGs).

Therefore, the redesign of assessments must not only verify knowledge and technical competencies but also encourage students to think critically about the ethical implications of AI, develop empathy, and create a global citizen's growth mindset amongst other things.

2.4 Governance and Risk Management

This part of the AI in Education framework outlines the governance and risk management strategies used by the Institution to ensure responsible implementation and ongoing monitoring of the AIED framework. It covers several key components:

Academic Oversight and Monitoring: This involves robust academic governance, primarily through the Academic Board and the Course and Subject Committee. These governance bodies conduct regular reviews and evaluations to assess the impact of AI tools as outlined in the framework on student learning outcomes. A component of the annual workplan is a dedicated report which reviews the outcomes of AI applications on the educational process, ensuring any potential issues are identified and addressed.

Regular and comprehensive course reviews: The Institution systematically monitors and evaluates its courses and subjects to ensure they continue to meet academic quality standards, the needs of stakeholders including industry and professional bodies, to mitigate any risks to quality and remain current and relevant. This means that during these interim monitoring and comprehensive course reviews, developments regarding artificial intelligence tools in each field of study and industries for which students are prepared, are taken into consideration and relevant changes and updates are made.

Risk Assessment and Mitigation: The Audit, Risk, and Compliance Committee is tasked with evaluating the inherent risks associated with AI tools and considers the proposed mitigating risk strategies. This includes regular (bi-annual) assessments of emerging risks and opportunities, enabling the institution to proactively manage potential issues related to the use of AI in Education. The Risk Register is an essential tool, capturing details related to the IT operating environment, data security, and ethical considerations associated with AI tools. It serves as a dynamic document, constantly updated to reflect new risk and challenges in the ever-evolving AI landscape.

Stakeholder Engagement and Collaboration: This involves interactions with key stakeholders, including industry partners, students, and academic staff. Regular forums and course advisory committees (CDASC) facilitate direct engagement, ensuring diverse stakeholder perspectives are incorporated into the ongoing review of the AIED framework. Industry collaborations enhance real-world relevance and innovation, while student and academic staff feedback informs continuous improvement. The student SETU survey is one method to collect the students' views. The stakeholder engagement underpins the dynamic evolution of AI applications in education, aligning technological advances with pedagogical needs and ethical considerations.

Consultation with IT Department: Effective collaboration with the Information Technology Department is a cornerstone of this framework. IT professionals, as part of the AI in Education (AIED) working group, play a pivotal role in reviewing the 'Technologies in Learning & Teaching Policy' and establishing other policies and procedures. The collaboration ensures that technological implementations are aligned with educational objectives and institutional capacities.

Framework implementation coordination: The responsibility of coordinating implementation plans is shared among Deans and Program Managers, supported by the Learning, Teaching, and Innovation team and overseen by the DVC (L&T). This ensures a cohesive approach to the integration of AI tools across different departments and programs, aligning them with the institution's educational objectives and the Learning and Teaching Policy.

Moderation and Validation of Assessment: The moderation of assessment, as outlined in the Assessment Policies and Procedures, ensures consistency in the application of the framework across various assessments. Additionally, the validation of assessments is important, requiring alignment with relevant institutional policies and procedures, to uphold the integrity and effectiveness of the evaluation processes.

2.5 IT Support, Data and Privacy

This element, integral to the AIED framework, is guided by an evolving institutional AI strategy that encompasses all members of the institution, staff and students. It promotes a culture of secure and privacy-conscious AI usage, including the responsible use of external AI tools outside the control of ICMS.

To address the risks associated with external tools, the institution will develop specific policies and guidelines aimed at safeguarding and enhancing awareness within the academic community, including both students and staff. These guidelines and policies, applicable on both academic and institutional levels, will be designed through a cooperative process involving the Academic, IT, and Quality Assurance (QA) departments, ensuring consistency and alignment.

This collaborative approach underscores the institutional commitment to a unified and comprehensive strategy for AI tools utilisation, ensuring that policy creation and implementation are reflective of the collective perspectives within the institution.

Approval of AI tools for Learning & Teaching

Before being utilised in assessments, AI tools are evaluated and tested by a team, including a Lecturer or Program Manager and an IT team member. This evaluation adheres to the institution's Privacy Policy and Records Management Policy. However, the use of external AI tools, which operate beyond the institution's jurisdiction, presents potential privacy and data breach risks.

To address these risks effectively, the evaluation team undertakes a consultation process prior to approval, acknowledging that the institution cannot assume legal and ethical responsibility for any data breaches or privacy violations stemming from the use of these external tools.

Best practices and guidelines

In support of the institutional AI strategy and the policies (under development), the Academic, IT and QA departments are collaborating on guidelines and best practices for the use of external AI tools to protect user privacy and data. Additionally, training sessions and resources are provided to enhance the understanding of the data and privacy risks associated with external AI tools and promoting their responsible use.

3 Related Documents

Related policies, procedures, guidelines and forms.

<https://policies.icms.edu.au/technologies-in-learning-and-teaching-policy/>

<https://policies.icms.edu.au/assessment-policy/>

<https://policies.icms.edu.au/assessment-procedures/>

<https://policies.icms.edu.au/academic-integrity-policy/>

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