

A university's comprehensive and integrated response to generative AI in assessment: preparing for a new educational landscape

Presented at the NZ AI in Higher Education Conference at the University of Otago, Wednesday 4 September 2024

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Purpose

At Auckland University of Technology (AUT), we have taken a whole-of-institution approach to the systematic integration of generative AI into assessment design. This work is grounded in a new set of university-wide Assessment Principles, Policy and Procedures that provide a foundation on which to build a sustainable approach to the integration of generative AI into assessment and feedback design. Alongside the policy, a framework has been created to enable teaching staff to make informed short and longer-term decisions about assessment design. In this short paper and presentation, we aim to showcase our approach including exploring challenges, opportunities and the potential relevance of it for others.

Abstract

The continued development of generative Artificial Intelligence (AI) has caused tertiary education to review and evaluate their assessment practices. At Auckland University of Technology (AUT), we have taken a whole-of-institution approach to the systematic integration of generative AI into assessment design. This work is grounded in a new set of Assessment Principles, Policy and Procedures that provide a foundation on which to build a sustainable approach to the integration of generative AI into assessment and feedback design. Alongside the policy, a framework has been created to enable teaching staff to make informed short and longer-term decisions about assessment design. In this short paper, we aim to showcase our approach by focusing on three areas: (1) exploring the broader contexts related to generative AI and its influence on our work at AUT, (2) detailing our specific responses to generative AI and assessment that align with institutional strategy, and (3) anticipating future opportunities and challenges in implementing our approach at scale.

Introduction

Assessment in a generative AI landscape

The impact of generative AI on tertiary education has been significant, necessitating a re-evaluation of assessment practices in tertiary education (Lodge et al., 2023; Thompson et al., 2023). Whilst the emergence of generative Artificial Intelligence (AI) has created new possibilities for learning and teaching, it has also highlighted some of the shortcomings in current assessment design within tertiary education. The key challenge for universities is how the learning that has taken place can be assured so that the achievement accurately reflects the expected outcomes of a student graduating in a particular discipline.

Ignoring, outrunning or detecting generative AI in assessment are not sustainable solutions to the challenges posed by this technology (QAA, 2023). A programme-wide adoption of invigilated in-person exams is neither practical nor inclusive. It is challenging to design non-invigilated assessment tasks that exclude the use of generative AI, and it appears almost impossible to detect if these technologies have been used in the production of assessment products in a reliable way (Perkins et al., 2024). There is a high likelihood that generative AI can produce outputs of acceptable quality for many assessment tasks, especially as students' skills in using these tools improve over time (Lodge et al., 2023). It is, therefore, necessary to address the nature of assessment in relation to generative AI directly, to provide sustainable approaches for students and staff.

Early guidance on the permitted use of generative AI by students to complete an assessment task tended to be based on a graduated or traffic light system. Whilst appealing, this approach did not align with the reality of assessment practice. A task falling under a red traffic light (in which the use of generative AI is not permitted) could only genuinely be enforced through an observed, secure assessment. Similarly, providing a rule on the extent to which generative AI is, or is not, permitted cannot be upheld if students are completing a task outside of a secure setting. A more sustainable and realistic approach was, therefore, needed.

The University of Sydney is regarded as a sector leader in generative AI and assessment. Sydney's development of a two-lane approach to assessment creates a realistic model for considering the role of generative AI (Liu & Bridgeman, 2023). Assessments conducted in Lane 1 take place in secure, controlled environments where AI is prohibited, while all other assessments sit in Lane 2 and acknowledge the prevalence of the technology, and the appropriate use of generative AI is supported through assessment design. It is this approach we have adopted at AUT in the form of two Channels.

This paper provides an overview of a strategy to develop a sustainable approach to assessment design in a generative AI-enabled landscape, based on Sydney's two-lane approach that reflects AUT's priorities and our Aotearoa New Zealand context. It explains how we have incorporated this work into a wider project to implement a new set of Assessment Principles and identifies the challenges associated with moving from policy to design and practice.

Context

Assessment at AUT

AUT is Aotearoa New Zealand's University of Technology, with around 19,000 full-time equivalent students. The university's new strategy, Te Kete, emphasises the need to adapt and respond to emerging technologies and engage students in the real-world application of their learning (Te Kete AUT Strategy, 2024). As an institution we must, therefore, consider how to positively and critically engage with generative AI so that students are equipped for life beyond their time at AUT.

We have been fortunate that the emergence of generative AI has coincided with the development of a university-wide assessment framework. The university is now taking a connected approach to assessment and has created a set of Principles | Mātāpono that inform the Policy and Procedures and guide practice and design. Five key features of the Principles inform the direction of work with generative AI in assessment:

1. Create a systemic view of assessment, to support a scaffolded, consistent experience.
2. Frame assessment as learning that combines summative and formative components of assessment (Bearman et al., 2024).
3. Reflect contemporary practices and emerging technologies.
4. Align with Te Aronui, AUT's Te Tiriti framework.
5. Reflect the AUT student experience.

The new Assessment Principles, Policy and Procedures will be implemented through a university-wide project and will enable systematic integration of generative AI into programmes over a two-year period. The next section will explain how AUT has incorporated generative AI into its Policy and Procedures and the implications for assessment design and practice.

Approach

Generative AI in the Assessment Principles, Policy and Practice

AUT's response to generative AI is woven into each of the seven Assessment Principles and is mentioned explicitly in the Policy and Procedures documents. Our approach to designing assessments with generative AI has drawn heavily on the work of the University of Sydney and the pioneering work of Danny Liu and colleagues which has been adopted by other institutions (ICMS, 2024; UNSW, 2024).

AUT's Assessment Procedures states that:

The ethical and critical use of Generative Artificial Intelligence Tools (Generative AI) by staff and students in learning, teaching and assessment is permitted within the framework provided by the University's Academic Discipline Regulations.

AUT has adopted Sydney's two-lane model (Liu & Bridgeman, 2023) to the use of generative AI in assessment and has reframed this so that assessment sits within one of two channels:

1. Secured, Controlled assessment tasks where it may be decided that Generative Artificial Intelligence tools cannot be used.
2. All other assessments acknowledge the ubiquity of Artificial Intelligence, and its use is (a) permitted within academic integrity guidelines, and (b) clearly communicated to students. The extent of the use of Artificial Intelligence in an Assessment will vary, depending on the Assessment design.

Programme teams will identify the key assessment moments in a programme where the assessment of learning in secure settings is required. Such assessment will sit in Channel 1. This would encompass activities such as observing a performance or assessing critical areas across a programme where staff want to understand students' knowledge without the immediate use of generative AI.

Most assessments will sit in Channel 2 and exist in a world where generative AI tools are prevalent. The role and contribution of AI tools to the assessment process and product must be considered. Learning is assured through the design of the assessment - judgements are focused on those elements that AI is less able to complete, or where students are explicitly asked to acknowledge or critically evaluate their use of AI. For assessments to sit authentically in Channel 2, it is likely that a redesign will be required. We want to whakamana teaching staff to make informed decisions about assessment design that will enable students to act with pono in their use of generative AI beyond AUT. AUT has, therefore, created a framework and associated guidance to help staff navigate this new environment.

The AREA framework

The AREA Framework provides a roadmap for supporting AUT's approach for responding to AI and assessment and comprises four stages: Assemble, Review, Engage, Assessment redesign (Figure 1). The framework recognises that AUT's goal of systemic redesign of assessment to meet the new Principles, Policy and Procedures will take at least two years. We have therefore created a framework that:

- Provides a scaffolded approach to support an authentic/genuine move to Channel 2.
- Reflects the variation in staff capacity, generative AI literacies and confidence.
- Provides a structured roadmap to reducing the risks posed by generative AI to the assurance of learning.
- Provides clarity to students about the permitted use of generative AI within an assessment task.

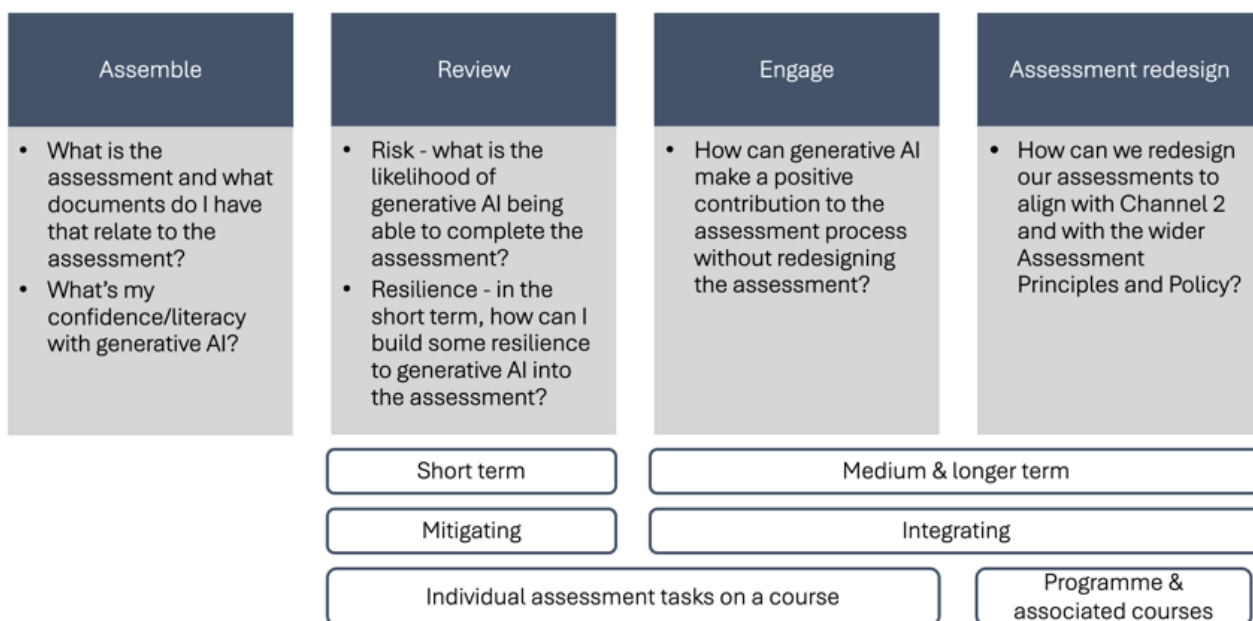


Figure 1 The AREA Framework

As noted in Figure 1 and Table 1, the Assemble and Review stages of the Framework are focused on mitigating the effects of generative AI on existing assessment tasks. We recognise that this is a short-term measure, and most non-secure assessments will be sitting outside of Channel 2. However, we see these as important steps to build knowledge and confidence for those staff who have yet to engage with AI and to provide some mitigation before courses and associated programme assessments are redesigned as part of the university's assessment project.

The Engage step moves towards more positive and purposeful engagement with AI and, whilst it may not involve a redesign, it marks a shift towards integrating generative AI into assessments. Staff can explore opportunities for students to begin to engage with AI as part of their wider assessment journey, noting that the extent of the use of generative AI in an assessment will vary, depending on the assessment design.

Table 1 AREA Framework stages description

Stage	Description
Assemble	Staff will gather existing assessments and consider documents like the course descriptor. They will also reflect on their digital literacy with AI and confidence levels and be able to access the required generative AI literacy support.
Review	Staff will evaluate existing assessments, with a particular focus on the risk posed by generative AI. This involves a self-review of each assessment task to determine the likelihood of AI successfully completing it (Doherty & Warburton, 2024). Based on this review, guidance will be provided on how some resilience might be built into the task.

Stage	Description
Engage	This stage involves considering where AI-related opportunities could be integrated into the learning process, without necessarily redesigning the assessment.
Assessment redesign	Staff will redesign their assessments to meet the requirements of Channel 2. This is likely to involve the revision of learning outcomes, new assessment and feedback strategies and design of activities.

To help staff navigate this challenging space, we are representing the two assessment channels as being two channels of a big river, drawing on the structure of an Aotearoa New Zealand braided river (Figure 2). We have split Channel 2 into six smaller channels called braids, which represent different parts of an assessment where generative AI could be involved. Each braid helps us consider when, where, and how students could engage with AI during a particular assessment task. The braids in Channel 2 are based on the menu concept from the University of Sydney (Liu & Bridgeman, 2023). It is the intention that the braided river approach provides a grounded and contextualised visualisation to support staff in navigating the complexities involved in engaging with AI and assessment. For students, this will help give them some consistency and clarity in the messaging about the use of AI in their assessments.

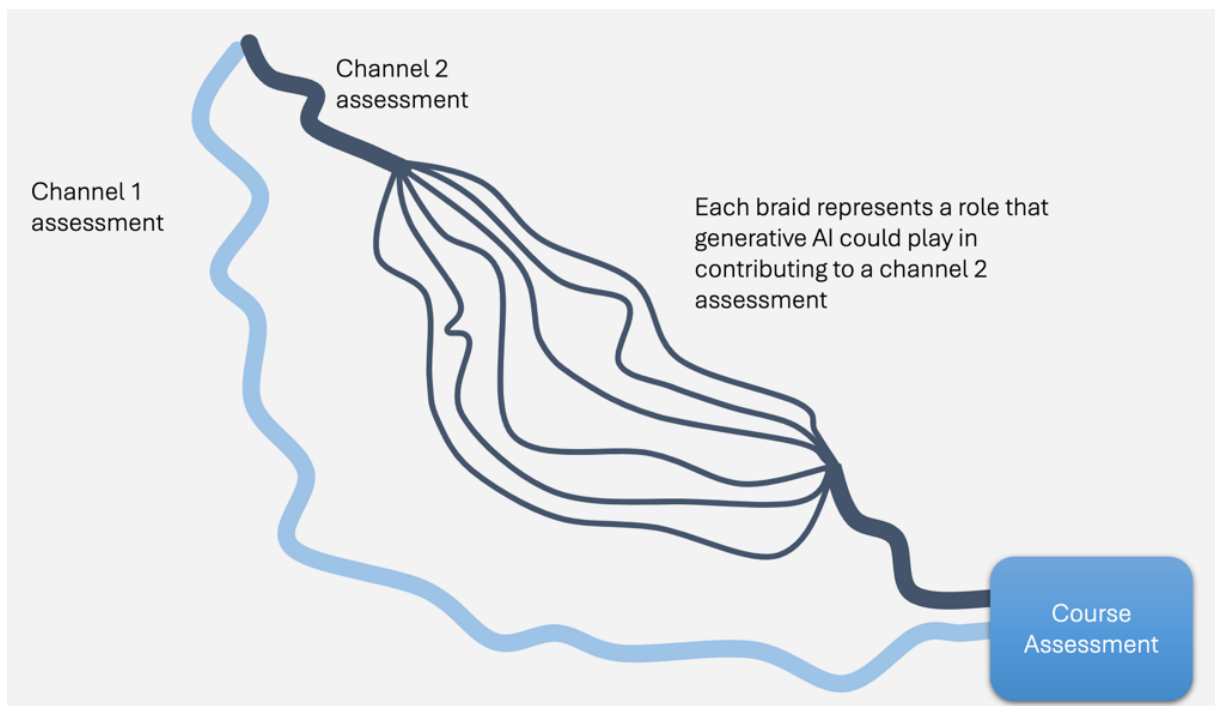


Figure 2 Channel 1 assessment and Channel 2 assessment with generative AI contribution

The work associated with the Assessment redesign step will take place as part of a university-wide project. Through this work, programme teams will identify the key assessment points where the assessment of learning in secure settings is required (Channel 1), or when the use of AI is permitted (Channel 2). The project will facilitate a consistent approach to the integration of generative AI into assessment across a programme and help teams make decisions about how assessment can help students prepare for the ethical and critical use of generative AI in their lives. There will be a focus on designing authentic assessments that focus on assessing the process of learning rather than the product, to emphasise those components that AI is less able to replicate.

Implementation and challenges

We are now preparing for the 2025-26 assessment project. The focus of this work is on socialising the Principles, Policy and Procedures, the AREA framework and planning the change management process. Faculties are currently identifying those programmes that the central educational design team will work alongside to redesign assessments. Before the project starts, we will work with specific groups who use assessments that are particularly vulnerable to generative AI – for example, those programmes using small stakes online quizzes or essays. The educational design team is working closely with ICT and Te Mātāpuna | Library and Learning Services to ensure that a consistent approach is taken to staff and student-facing guidance.

The challenges associated with integrating generative AI into assessments are well-documented (Lodge, 2024). For many, a genuine move to Channel 2 will require a significant change in assessment design and practice. First, the learning outcomes on which judgements are made may be markedly different. Second, assessing the process of learning, rather than just the product may be a new endeavour for staff and students. Finally, a greater emphasis on fostering relationships and dialogue within our learning spaces may be required, including interactions between peers and teachers, as well as with generative AI.

We will also need to reframe academic integrity and AUT procedures will require further review considering the new assessment policy and developments with generative AI. Plagiarism definitions are evolving, the line between human and generative AI-generated content is becoming increasingly blurred and attribution is more important than ever (Eaton, 2023).

Application to other institutions

This paper set out to outline a university's comprehensive and integrated response to generative AI in assessment, and in doing so it has highlighted some points that may apply to other institutions, their faculties, schools or departments.

- Where possible, embed the response to generative AI within other work taking place at your institution.
- Top-down leadership and socialisation are essential to highlight clearly the opportunities and challenges.

- An approach to change management underpinned by manaaki is key. In some cases, a radical shift in assessment design and practice will be required and many years of established practice will need to be rethought.
- Staff who are confident with, and advanced users of, generative AI will play a key part in taking a systematic approach by bringing policy into design and practice and reflect disciplinary differences. Similarly, working with staff who are less confident to create examples of assessment design is important.
- Framing assessment as learning is important, so that AI can potentially contribute to any task or activity that supports students to better understand the intentions of summative assessment. This more holistic view of assessment allows staff to integrate generative AI at all stages of the learning journey.
- Redesigning assessment for generative AI can support other priority areas e.g. student well-being.
- A consistent approach across service divisions is required for consistency of message/approach/able to share the workload.
- Alignment with place is possible but we need to keep ensuring this is done appropriately across all aspects of an institution's engagement with generative AI (e.g. data sovereignty, inclusive and accessible practices).

Conclusion

This paper has outlined how AUT is navigating the complexities and opportunities presented by generative AI. At AUT, we are emphasising a systemic approach that aligns with institutional strategy and the wider educational context. The AREA framework guides this transition, supporting staff in redesigning assessment while addressing varying levels of AI literacy and confidence. Our focus on change management, capacity building, and cross-divisional collaboration will ensure a consistent and supportive approach.

We recognise that we have drawn on the expertise and knowledge of others and have been struck by their openness and manaaki to whakamana us in this challenging and fast-moving space. Building on this work, we hope our approach provides insights for other institutions facing similar challenges. Given the opportunities and challenges that AI will continue to present, ongoing collaboration between institutions, both within Aotearoa New Zealand and globally, is essential as we ready ourselves for the future.

Acknowledgments

The authors acknowledge the support and input from the PVC Learning and Teaching, Felicity Reid and the Director of Academic Quality, Heather Merrick. We also thank the Learning Design team at the Office of Learning, Teaching and Educational Design for their leadership and support in developing resources in this space.

References

- 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>
- Doherty, S., & Warburton, S. (2024, April 30). *AI and assessment redesign: A four-step process*. THE Campus Learn, Share, Connect. <https://www.timeshighereducation.com/campus/ai-and-assessment-redesign-fourstep-process>
- Eaton, S. (2023, February 25). 6 Tenets of Postplagiarism: Writing in the Age of Artificial Intelligence. *Learning, Teaching and Leadership*. <https://drsaraheaton.wordpress.com/2023/02/25/6-tenets-of-postplagiarism-writing-in-the-age-of-artificial-intelligence/>
- ICMS. (2024). *Generative AI: Ethical Use and Acknowledgement - ICMS*. https://www.icms.edu.au/learning-and-teaching/academic-integrity/academic_integrity_ai/
- Liu, D., & Bridgeman, A. (2023, December 8). *Embracing the future of assessment at the University of Sydney – Teaching@Sydney*. <https://educational-innovation.sydney.edu.au/teaching@sydney/embracing-the-future-of-assessment-at-the-university-of-sydney/>
- Lodge, J. M. (2024). *AI cheating in education: What can we do right now?* <https://www.linkedin.com/pulse/ai-cheating-education-what-can-we-do-right-now-jason-m-lodge-ipbtc/>
- Lodge, J. M., Howard, S., Bearman, M., Dawson, P., & Associates. (2023). *Assessment reform for the age of artificial intelligence*. <https://www.teqsa.gov.au/guides-resources/resources/corporate-publications/assessment-reform-age-artificial-intelligence>
- Perkins, M., Furze, L., Roe, J., & MacVaugh, J. (2024). The Artificial Intelligence Assessment Scale (AIAS): A Framework for Ethical Integration of Generative AI in Educational Assessment. *Journal of University Teaching and Learning Practice*, 21(06), Article 06. <https://doi.org/10.53761/q3azde36>
- QAA. (2023). Reconsidering assessment for the Chat GPT era: QAA advice on developing sustainable assessment strategies.
- Te Kete AUT Strategy. (2024). *Te Kete AUT Strategy*. https://www.aut.ac.nz/__data/assets/pdf_file/0010/899056/Te-Kete-strategy-digital-FINAL.pdf
- Thompson, K., Corrin, L., & Lodge, J. M. (2023). AI in tertiary education: Progress on research and practice. *Australasian Journal of Educational Technology*, 39(5), 1–7. <https://doi.org/10.14742/ajet.9251>
- UNSW. (2024). *2 lanes or 6 lanes? It depends on what you are driving: Use of AI in Assessment*. <https://www.education.unsw.edu.au/news-events/news/two-six-lanes-ai-assessment>