Institutional alignment with TEQSA's generative AI principles in Australian universities: A national document analysis with implications for ICT education

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Global interest in artificial intelligence- (AI) supported assessment is growing; however, few studies have examined how institutional responses align with regulatory standards, particularly in information and communications technology (ICT) education. This study conducted a national-level document analysis of publicly available resources from 39 Australian universities offering ICT programmes, exploring how institutions are responding to generative AI integration in assessment practices against the Tertiary Education Quality and Standards Agency's two core principles: preparing students to engage ethically in an AI-driven world and ensuring reliable and trustworthy assessments of student competencies. As ICT-specific documentation was largely absent from the public domain, findings were drawn predominantly from generic university-wide policies, with ICT serving as a case context where discipline-specific guidance is notably lacking. Findings revealed encouraging progress in institutional positioning, with publicly available documents indicating increased policy articulation, referenced training initiatives and stated commitments to AI literacy. However, the analysis also exposed inconsistencies in policy coherence, limited ICT-specific guidance and substantial variation in how GenAI is addressed across institutional documents. The paper recommends stronger integration of AI ethics, clearer communication of permitted AI uses and targeted professional development for ICT staff, contributing to evolving discourse on responsible AI use and equitable, future-ready assessment design.

Implications for practice or policy:

- ICT course leaders should develop discipline-specific GenAI guidance for technical assessments, largely absent across Australian universities.
- Institutional leaders should invest in operational governance structures, documented in only 7 of 39 universities.
- Sector bodies should develop discipline-specific extensions to existing GenAI frameworks, as institution-level principles have not produced targeted ICT guidance.
- Assessors should prioritise process-based and authentic ICT assessment designs, referenced by only 21 universities.

Keywords: AI-based assessments, ICT education, digital competency, GenAI policies, academic integrity, institutional alignment, document analysis

Introduction

Generative artificial intelligence (GenAI) technologies have rapidly gained traction in higher education, prompting universities worldwide to re-evaluate assessment practices. Internationally, studies have begun to analyse institutional responses and policy frameworks related to GenAI in assessment (Mahrishi et al., 2024; McDonald et al., 2025; Moorhouse et al., 2023; Smolansky et al., 2023). However, a significant gap remains in discipline-specific analysis. Very few studies have analysed GenAI in assessments in information and communications technology (ICT) education (Atif et al., 2025; Balse et al., 2023; Chugh, Turnbull, et al., 2025; Elkhodr et al., 2023), and even fewer have focused on AI-driven assessments in Australian ICT education (Kizilcec et al., 2024; Sandu et al., 2024).

ICT assessments are designed to evaluate technical proficiency such as programming, database management and software development, to test students' analytical and problem-solving abilities through tasks like algorithm design and debugging exercises (Koppi & Naghdy, 2009). Students are also assessed on their capacity to design and develop ICT solutions, often through projects requiring system architecture planning or user interface design. Many assessments incorporate the evaluation of professional skills, including teamwork, communication and project management, particularly in group assignments and presentations. This multifaceted approach ensures alignment with both academic outcomes and industry expectations (Edwards, 2023).

GenAI has raised numerous challenges around academic integrity, which remains central to maintaining standards in assessment. Simon et al. (2022) found that in ICT assessments, proctored, in-person assessments, such as timed coding exams or troubleshooting simulations, are still considered gold standards for verifying individual student performance. Conversely, open-book or open-resource assessments allow students to use AI tools for real-world problem-solving, such as collaborative coding platforms or AI-driven feedback systems. While these provide rich, authentic learning experiences, they raise concerns regarding academic integrity, particularly in evaluating the extent of AI's contribution to student work (Matheis & John, 2024; Sok & Heng, 2024).

Literature review

This section reviews literature across three areas relevant to this study: GenAI challenges in ICT assessment contexts, gaps in policy-level and discipline-specific research and the two guiding principles for ethical GenAI integration in assessment – Principle 1 (preparing students to engage ethically in an AI-driven world) and Principle 2 (ensuring reliable and trustworthy assessments of student competencies), established by the Tertiary Education Quality and Standards Agency (TEQSA; Lodge et al., 2023) – which framed the analysis.

GenAI in ICT assessment contexts

The integration of GenAI into assessment presents significant challenges in ICT education, where many tasks are highly automatable. Introductory programming tasks are particularly vulnerable to GenAI tools such as ChatGPT (Scholl & Kiesler, 2024), GitHub (Dickey et al., 2024), Copilot (Mahon et al., 2024) and CodeWhisperer (Siddiqui et al., 2025), which can generate accurate code solutions with minimal user input (Hazzan & Erez, 2025), making it difficult to assess genuine student understanding (Luo, 2024). Balse et al. (2023) demonstrated that GPT-3 can solve programming tasks and provide feedback on logic and syntax, diminishing the formative value of such assignments. Chugh, Turnbull, et al. (2025) found widespread GenAI reliance among ICT students for laboratory exercises, while Elkhodr et al. (2023) noted students using ChatGPT to answer algorithmic questions without understanding the underlying design process. Kizilcec et al. (2024) similarly found that computing students frequently employed GenAI tools to complete low-stakes theory quizzes and take-home reflections. These issues are particularly acute in take-home assessments lacking real-time supervision (Wang et al., 2024), with growing concern that ICT assessments may fail to evaluate genuine technical reasoning.

ICT assessments vary significantly in approach. Formative assessments such as code-based activities and reflective exercises emphasise continuous learning, while summative assessments focus on evaluating final competencies and forming reliable judgements of student abilities (Buzzetto-More & Alade, 2006; Ferdousi, 2024; Jha & Atif, 2025; Khosravi et al., 2022). Well-designed assessments are critical for preparing students to meet evolving professional standards (Fischer et al., 2024).

Research gap

AI-driven assessment scholarship is rich in systematic literature reviews (Chinnasamy et al., 2024; Ouyang et al., 2023; Raza et al., 2024), yet much of the literature has focused on AI tools enhancing assessment across disciplines through online quizzes (Shaik et al., 2023), e-portfolios (Foung et al., 2024) and automated feedback systems (Chattopadhyay, 2025; Lee & Moore, 2024) rather than ICT education itself. Most studies have addressed general pedagogical implications (Kutty et al., 2024; Moorhouse et al., 2023) or student perspectives (Elkhodr et al., 2023; Jha et al., 2025; Kizilcec et al., 2024), with few examining how institutions are responding structurally through policy (McDonald et al., 2025). This gap is particularly significant given that ICT assessments are especially vulnerable to GenAI intervention due to their technical and automatable nature. Examining how Australian universities are aligning with TEQSA's guiding principles for GenAI in assessment therefore represents a critical and under-explored area of inquiry complementing foresight-oriented analyses of institutional response trajectories in the same context (Atif et al., 2025).

The TEQSA principles as an analytical framework

A discussion paper titled "Assessment Reform for the Age of Artificial Intelligence" (Lodge et al., 2023), developed in response to growing concerns from educators, policymakers and academic integrity bodies, drew on university submissions and sector-wide consultations to explore how institutions might ensure the validity, reliability and integrity of student assessments in a GenAI-enabled environment. The paper introduced two guiding principles which, while not mandatory, offer sector-informed guidance for enhancing assessment practices: Principle 1 focuses on preparing students to engage ethically in an AI-driven world, a particularly vital consideration in ICT education, where technology and ethics frequently intersect. It emphasises AI literacy, including understanding of ethical dimensions, limitations, biases and societal implications, as itself worthy of assessment. Principle 2 highlights the importance of designing assessments that yield reliable and trustworthy judgements about students' technical and theoretical competencies, reinforcing the need for rigour and fairness in AI-mediated learning contexts. In November 2024, TEQSA released a toolkit to assist Australian universities in developing effective strategies for the ethical integration of GenAI into teaching and learning (TEQSA, 2024).

By focusing on publicly available institutional documents as authoritative reflections of how universities communicate their commitments and priorities, the present study provides a system-level view of current policy positioning rather than verified assessment practice, contributing to national discussions about educational integrity, AI-readiness and quality assurance in ICT education. The two TEQSA principles drawn from Lodge et al. (2023) constitute the analytical foundations of this study and directly informed the following research questions (RQS):

- RQ1. How do institutional policies in Australian universities align with TEQSA's principles for AI-supported assessments?
- RQ2. What strategies, as documented in publicly accessible sources, are used to ensure fairness, transparency and academic integrity in AI-driven assessments in Australian higher education?
- RQ3. What gaps or inconsistencies exist in publicly available institutional documents concerning ethical AI guidance for ICT assessment practices?

Methodology

This section describes the methodological framework applied in our study, a comprehensive analysis of publicly available institutional documents related to GenAI assessment practices across 39 Australian universities. The document analysis was structured at two distinct levels: *context level* and *content level*, capturing both institutional contexts and specific implementation practices.

Context-level review

The context-level review involved systematically identifying, selecting and organising institutional documents from 39 Australian universities offering ICT programmes, sourced through the TEQSA (2024b) national register. While Australia has 44 accredited universities, five were excluded due to the absence of relevant ICT offerings. The selected universities reflect diversity in affiliation and geography: 27 (69.23%) are members of the Australasian Council of Deans of Information and Communication Technology and 12 (30.77%) are unaffiliated, ensuring institutional diversity. These institutions offer ICT education across undergraduate (38 universities, 97.44%), postgraduate (36 universities, 92.31%) and research-level programmes (21 universities, 53.85%), spanning disciplines including information technology (25), data science (26), cyber security (24), computer science (24) and information systems (21).

Universities were classified by enrolment size using Alsmadi and Taylor's (2018) framework: 21 (53.85%) fell into the huge category (over 30,000 students), 17 (43.59%) into the large category (15,000–30,000 students) and one (2.56%) into the small category. The absence of medium institutions and the under-representation of small institutions reflect the actual distribution of Australian universities offering ICT programmes between April and May 2025 rather than a sampling decision, as the study aimed for full population coverage within the defined scope. Nonetheless, the overwhelming dominance of huge and large institutions (97.44%) means findings should be interpreted with caution in relation to smaller providers, which may differ in policy articulation capacity, staffing resources for assessment redesign and ability to develop ICT-specific guidance. Geographically, institutions span all Australian states and territories: New South Wales (7), Queensland (6), Victoria (5), Western Australia (4), the Australian Capital Territory (2), South Australia (1) and 14 universities operating campuses across multiple states.

Table 1 outlines the multi-phase methodological process, capturing key activities and decisions at each stage to provide a clear and replicable account of how the data were sourced, reviewed and analysed.

Table 1
Methodological steps for institutional document analysis on GenAI and assessment practices

Step	Activity
Identification	Define scope: Review publicly available documents related to GenAI use in assessment across 39 Australian universities (identified via TEQSA National Register; 44 accredited universities, 5 excluded due to no ICT offerings). Focus: Alignment with TEQSA Principles 1 (ethical AI use) and 2 (reliable, valid assessment). Research questions: What practices and policies exist? How are institutions operationalising these policies and practices in ICT assessment contexts?
Acquisition	Repositories: University websites, policy repositories, library portals, teaching and learning centres, TEQSA's GenAI Hub, Parliament of Australia submissions and publicly available university responses to TEQSA. Search period: April – May 2025. Document types: Institutional policy documents, assessment guidance materials, multimedia and informal resources, examples of practice, and formal institutional submissions. Keywords: "generative AI", "artificial intelligence", "AI policy", "assessment policy", "AI and assessment", "academic integrity policy", "integrity policy", "misconduct" and "code of conduct".

Step	Activity
	Institution-by-institution protocol: Search protocol applied individually to each of the 39 universities. For each institution: (1) keywords searched via institutional homepage search bar, with result titles and hyperlinks screened for relevance before opening and reviewing content; (2) institution's policy repository accessed directly to search for current policies on integrity, assessment procedures, ethics, and AI. AI policy documents retained even where outdated. Duplicate documents (identical content in multiple formats) not retained for screening. Documents identified: 590.
Purification	Inclusion: Publicly accessible documents (without login restrictions) relevant to AI use in assessment, academic integrity, or teaching and learning, available through university or national-level repositories. Exclusion: Staff intranet or password-protected pages (*N* = 53), duplicates and ICT-specific internal documents not publicly accessible. Metadata recorded: Source, date of retrieval, type of document. Documents retained for analysis: 537.
Evaluation	Context-level review: Preliminary scan to assess institutional transparency and variation in availability of GenAI-related assessment documentation; mapped extent and location of GenAI references (e.g., standalone policies, embedded in misconduct frameworks). Content-level review: Reviewed TEQSA guidance to derive assumptions, focus areas and coding keywords for each principle; conducted iterative inductive-deductive coding of a sample of institutional documents; finalised scoring rubric (0–3 scale) and analytical themes for each principle. All 537 documents across 39 universities coded against TEQSA Principles 1 and 2. Documents categorised by theme: Institutional capabilities, policy frameworks, assessment redesign, academic integrity. Frequency of sub-themes tabulated per institution. Institutional alignment outcomes: 22 universities with at least one explicit GenAI-in-assessment document; 17 with general policy documentation only; two with no relevant documentation identified.
Reporting	Reporting conventions: Explanations with tables and figures. Limitations: (a) Time-bound review (April – May 2025; (b) exclusion of internal and faculty-level documents; (c) ICT-specific depth varied due to limited publicly available data. Note on replicability: Given the dynamic nature of institutional websites, replication of this search later may yield different results as policies evolve (Stansfield et al., 2016).

Identifying and selecting institutional documents on generative AI assessment practices

Following the search protocol detailed in Table 1, institutional documents were manually collected from the official websites of all 39 universities. Searches extended beyond institutional homepages and policy repositories to include library portals, teaching and learning centres, digital hub, and national resources such as the TEQSA (2025) GenAI Knowledge Hub. University submissions to the Parliament of Australia's House Standing Committee on Employment, Education and Training inquiry (launched 24 May 2023) (Parliament of Australia, 2023) and publicly available (recently published) responses to TEQSA (2025) were also reviewed.

Of the 39 universities examined, 22 (56.14%) had at least one publicly available document explicitly addressing GenAI in assessment contexts. All retrieved documents were saved as PDFs and logged with retrieval and publication dates. The search was conducted between April and May 2025. Due to limited publicly available ICT-specific policies, discipline-related keywords were excluded in favour of a broader institutional-level search strategy. Documents were included if publicly accessible without login restrictions, issued at the university level, and explicitly addressing GenAI in assessment, academic

integrity or teaching and learning contexts. Materials were excluded if they duplicated other formats, promoted events without substantive policy content, consisted only of hyperlinks or external links, focused exclusively on AI in research, represented outdated policy versions or comprised informal advice not formally issued by the university. Of 590 documents initially identified, 53 were excluded as they were staff intranet or password-protected pages not publicly accessible, yielding 537 documents retained for analysis. As Stansfield et al. (2016) have cautioned, systematic website-based searches are inherently non-static, and replication at a later date may yield different results as institutional policies evolve.

Categorising document types

These 537 institutional documents were each categorised into one of five broad groups based on content and primary function, as illustrated in Table 2. ICT-specific documents such as course outlines, subject descriptions, assessment rubrics and internal programme materials were excluded due to limited public availability, meaning findings related to ICT assessment practice are necessarily drawn from generic university-wide policy documents rather than discipline-specific sources. Quantitative data were analysed using descriptive statistics, frequencies and percentages to determine the proportion of universities addressing themes aligned with TEQSA's principles. An inductive coding process involving iterative reading was also employed to identify representative excerpts illustrating key thematic patterns relevant to GenAI assessment practices.

Table 2
Categories and descriptions of institutional documents analysed in the study

Category	Description
Institutional policy documents	Formal policies and procedures related to academic integrity, student conduct and assessment, including university-wide AI position statements and GenAI frameworks.
Assessment guidance materials	Pedagogical and procedural documents focused on assessment in AI contexts, including study guides and instructional resources advising on GenAI use in designing or evaluating student work.
Multimedia and informal resources	Informal educational content such as blog posts, news articles, videos, webinars, presentations and resources from digital learning hubs or GenAI-related events.
Formal submissions	Official documents submitted by universities to national bodies such as TEQSA in response to inquiries on GenAI in education.
Examples of practice	Documents highlighting real-world implementations in teaching or assessment, including case studies, pilot reports and example use scenarios.

Content-level review

The content-level analysis focused on evaluating institutional alignment with TEQSA's Principle 1 (preparing students to engage ethically in an AI-driven world) and Principle 2 (ensuring reliable and trustworthy assessments of student competencies). The analysis was conducted by two of us with expertise in higher education policy and educational technology. The first of us reviewed all institutional documents, documented qualitative observations for each university and assigned scores based on the 0–3 rubric (see Table 4). For the purposes of quadrant classification, scores of 2 and 3 were grouped as high alignment, reflecting the presence of substantive and functional policy engagement; scores of 0 and 1 were classified as low alignment, indicating absent or nascent policy development. This grouping was adopted to provide a sector-level overview of institutional positioning, acknowledging that it does not distinguish between moderate and comprehensive alignment within the high-alignment group. The other independently reviewed these qualitative observations and assigned scores using the same rubric criteria, with both researchers applying the framework consistently throughout. Scores reflect the presence and quality of policy language within publicly available documents and should be interpreted as indicators of institutional positioning rather than evidence of implemented assessment practice.

To operationalise this evaluation, a set of guiding assumptions and analytical keywords was developed for each principle through a deductive-inductive process (see Table 3). In the deductive phase, TEQSA's (2025) published guidance, particularly documents relating to assessment integrity and regulatory expectations, was reviewed to identify key focus areas. This was followed by an inductive phase, in which approximately 20% of the total document sample was analysed to iteratively refine the assumptions and keywords. The resulting framework informed thematic coding and interpretation, ensuring evaluation criteria were both conceptually grounded in national regulatory standards and empirically aligned with practices present across the data set.

Table 3
Focus area, assumptions and keywords for TEQSA Principles 1 and 2

Component	Principle 1 (preparing students to engage ethically in an AI-driven world)	Principle 2 (ensuring reliable and trustworthy assessments of student competencies)
Focus	Prepares students to engage ethically in an AI-driven world, highlighting the intersection of technology and ethics in ICT education.	Emphasises robust assessment design supporting valid and trustworthy evaluation of students' technical and theoretical competencies.
Underlying assumption	Universities should embed AI and digital ethics, responsible AI use, and technological citizenship into curricula, with institutional performance reflecting the extent to which ethical engagement is cultivated in technology-rich learning environments.	Universities must ensure that assessment design is robust, valid, and trustworthy, with institutional performance reflecting the ability to fairly and accurately evaluate students' ICT-related capabilities through competency-based assessment and clearly demonstrated learning outcomes.
Keywords	Institutional capability, governance, ethical policy framework, strategic commitment	Learning outcomes, assessment integrity, educational practice

Note. Keywords were used to guide coding and support thematic interpretations during analysis.

A 4-point scoring system was developed to assess alignment between institutional documents and each TEQSA principle: 3 = *strong alignment*, 2 = *moderate alignment*, 1 = *limited or weak alignment* and 0 = *no evidence of alignment*. Qualitative descriptors guiding this scoring process are detailed in Table 4. To enhance the credibility and consistency, a verification procedure was employed in which discrepancies between the two sets of scores were resolved through reflective discussion until consensus was reached, reducing individual interpretation bias and strengthening the dependability of final scores. We acknowledge that this differs from full inter-rater reliability, in which both raters independently access and code source documents.

Table 4
Scoring criteria for alignment with TEQSA Principles 1 and 2

Score	Principle 1 (preparing students to engage ethically in an AI-driven world)	Principle 2 (ensuring reliable and trustworthy assessments of student competencies)
3	Clear and structured integration of ethical and responsible AI use within curriculum or assessment. Explicit institutional commitment to digital ethics and AI governance.	Assessment practices are detailed, validated and explicitly linked to learning outcomes. Includes evidence of human oversight, rubric calibration or assessment redesign.

Score	Principle 1 (preparing students to engage ethically in an AI-driven world)	Principle 2 (ensuring reliable and trustworthy assessments of student competencies)
2	Acknowledges ethical or responsible AI use in general terms. Academic integrity is mentioned but not fully operationalised within curriculum or assessment strategies.	Assessment quality or fairness is referenced but lacks specificity. Learning outcomes or competencies but mechanisms are loosely defined.
1	Mentions AI ethics or integrity without elaboration. No clear connection to curriculum, pedagogy or student activities.	Assessment described in vague or generic terms without reference to learning outcomes, competencies or reliability.
0	No mention of AI-related ethics, responsibility, digital integrity or academic values.	No reference to assessment quality, reliability, competencies or learning outcomes.

Where multiple documents existed for a single institution, a holistic judgement was applied, whereby all available documents were considered collectively to assign a single score per principle reflecting the institution's overall alignment. This approach prioritised breadth of evidence, ensuring institutions were not penalised for distributing policy content across multiple sources. A codebook with illustrative scoring exemplars is provided in the Appendix.

In addition to principle-based scoring, overarching themes and sub-themes were identified using deductive and inductive strategies. Deductive codes were derived from the analytical framework linked to TEQSA's principles (Table 3), while inductive codes emerged from repeated language patterns within the documents. Coding was conducted using NVivo 12 and Microsoft Excel to support the systematic organisation and retrieval of text segments. Following coding, the frequency of theme occurrence across institutions was calculated using descriptive statistics (counts and percentages).

Findings

This section presents findings structured around the three RQs, organised according to institutional alignment with TEQSA's guiding principles, emerging thematic trends and identified gaps in policy and practice. Each subsection addresses one RQ and is supported by evidence drawn from the national-level document analysis.

Three levels of analysis are employed throughout. At the document level, 537 publicly available institutional documents were identified and reviewed. At the institution level, each of the 39 universities was analysed and scored against TEQSA's two principles, forming the primary unit of analysis for RQ1 and RQ2. At the availability level, 22 out of 39 universities had at least one document explicitly focused on GenAI in assessment contexts. Unless otherwise stated, all frequencies and percentages refer to the institution level (N = 39). Alignment scores were derived from the totality of publicly available institutional documentation, including general academic integrity policies, assessment frameworks and ethical AI use guidelines, where these contained evidence relevant to TEQSA's principles. Institutions did not require a standalone GenAI-specific document to receive an alignment score, and the 22 institutions with explicitly GenAI-focused documents represent a subset of the broader corpus used for scoring.

Alignment with TEQSA's principles

RQ1. How do institutional policies in Australian universities align with TEQSA's principles for AI-supported assessments?

The following analysis was conducted at the institution level (N = 39). Figure 1 presents a quadrant model mapping institutional alignment with TEQSA Principle 1 (preparing students to engage ethically in an AI-driven world) and Principle 2 (ensuring reliable and trustworthy assessments of student competencies), with each university scored on a 0–3 scale. Scores of 2 or 3 are grouped as high alignment for quadrant

classification purposes; scores of 0 or 1 indicate low alignment (see the Methodology section for the rationale for this grouping). The four quadrants reflect different patterns of institutional emphasis:

- Top right. High alignment with both principles, comprehensive AI policy frameworks with well-integrated ethical and assessment practices.
- Bottom right. Strong Principle 1 but weaker Principle 2, ethical engagement without sufficient attention to assessment robustness.
- Top left. Strong Principle 2 but limited Principle 1, outcome-focused practices without broader institutional AI ethics policy.
- Bottom left. Low alignment with both principles, limited institutional engagement with GenAI in assessment.

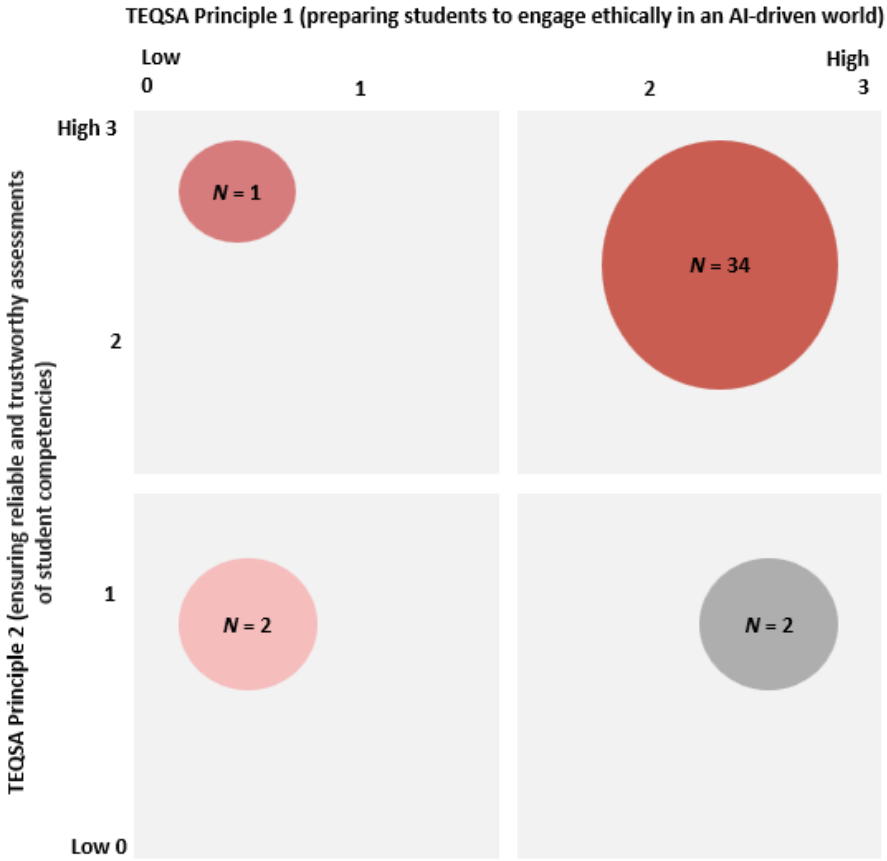

Figure 1. Quadrant model of institutional alignment with TEQSA principles for AI-supported assessment

Most universities (34 out of 39; 87.2%) demonstrated high alignment with both principles as a preliminary classification based on publicly available documents, placing them in the top-right quadrant. However, this finding should be interpreted cautiously: high alignment reflects the presence of relevant policy language across publicly available documents rather than the quality, specificity or implementation readiness of those policies. This also reflects the breadth of documentation considered, including general academic integrity and assessment policy language, and not solely GenAI-specific policy documents. Two universities (5.13%) were positioned in the bottom-left quadrant, indicating limited policy development and assessment innovation. One university (2.56%) appeared in the top-left quadrant, showing strong Principle 2 alignment despite limited ethical AI engagement, suggesting an outcome-focused approach where assessment reliability exists independently of broader AI policy. Two universities (5.13%) occupied the bottom-right quadrant, indicating a potential gap between policy-level ethical commitment and assessment implementation. Together, these quadrants account for all 39 institutions (34 + 2 + 1 + 2 = 39).

Institutions in the top-right quadrant documented alignment with both TEQSA principles through formal policy frameworks, publicly available GenAI use guidelines and referenced professional development initiatives. For instance, the University of Sydney has adopted a "two-lane" Sydney assessment framework integrating GenAI across assessment types and academic integrity mechanisms (Bridgemann & Liu, 2025). Other universities, including Charles Sturt University (2025), Macquarie University (2025), Flinders University (n.d.), La Trobe University (2024) and the University of Technology Sydney (2025), have released publicly available institution-wide GenAI guidelines. Many institutions reference staff capacity-building through professional development on AI literacy and assessment redesign in publicly available documents, with notable examples including the University of New South Wales (2025), the University of Technology Sydney (2025), the University of Sydney (2025) and the University of Western Australia (2025). Several universities have also documented AI governance structures such as AI Hubs and library-led resource portals in publicly available resources. A standout example is Deakin University's AI training module, referenced by the Australian Catholic University (2025), as an adopted resource and cited as a best-practice model across the sector. Most universities include clear guidelines for referencing AI-generated content in their publicly available documents; for example, the University of Melbourne (2025) states that students are required to cite AI sources when permitted, with unit or subject coordinators clarifying use policies for specific assessments.

Thematic analysis

RQ2. What strategies, as documented in publicly accessible sources, are used to ensure fairness, transparency, and academic integrity in AI-driven assessments in Australian higher education?

The following thematic analysis was conducted at the institution level (N = 39). Frequencies count in Tables 5 and 6 reflect the number of universities in which each sub-theme was mentioned across documents, not the number of documents, regardless the depth, comprehensiveness or prominence of that mention within the document. Analysis revealed two overarching themes for each principle, presented in turn below.

- Institutional alignment with TEQSA's Principle 1 (preparing students to engage ethically in an AI-driven world)

Analysis of institutional documents revealed two overarching themes aligned with TEQSA's Principle 1: institutional capabilities and policy frameworks (see Table 5). These themes reflect how universities are documenting commitments to developing internal infrastructure and formal expectations to support ethical and responsible integration of generative AI into teaching, learning and assessment.

Institutional capabilities were reflected in five sub-themes: staff training on GenAI, access to institutional GenAI tools, student GenAI literacy initiatives, GenAI-focused communities of practice and GenAI governance bodies. AI governance structures were explicitly mentioned by only seven universities: Charles Sturt University (2023), Edith Cowan University (2023), Griffith University (2025), Swinburne University of Technology (2023), University of Newcastle (2025), University of Melbourne (n.d.-a) and University of the Sunshine Coast (2024). The most comprehensive example was University of Melbourne's (n.d.-a), Generative Artificial Intelligence Taskforce, coordinating activities across education, research and operations. Other examples include Charles Sturt University's (2023) staff-student consultative committee, Edith Cowan University's (2023) AI Steering Committee and University of Newcastle 's (2025) AI Working Group. Eight institutions referenced GenAI-focused communities of practice in publicly available documents: Australian Catholic University (2023), Charles Darwin University (n.d.), Queensland University of Technology (n.d.), University of Adelaide (2023), University of Melbourne (n.d.-b), University of New South Wales (n.d.), University of Sydney (n.d.) and Victoria University (n.d.). Universities varied in their documented approach to licensed GenAI tools; for instance, institutional documents indicate Grammarly was accepted at Curtin University (n.d.) and University of Western Australia (n.d.) for grammar support, while Australian National University's (n.d.) documents reference access to Microsoft CoPilot and Adobe Firefly. Following the Australian Government's ban on DeepSeek on government devices in

February 2025, several universities documented decisions to restrict its use due to data security concerns, including the University of Western Australia (n.d.).

Policy frameworks were the most frequently observed theme, encompassing student guidelines on GenAI use, institutional GenAI policy and principles, staff guidelines and the integration of GenAI into assessment frameworks. Policies addressed equity, ethical use, transparency, data privacy, academic integrity. Notable examples include Australian Catholic University's (2024) institutional AI policy grounded in values such as human dignity, transparency and equitable access and Charles Sturt University's S.E.C.U.R.E. framework, offering practical guidance for ethical AI use across assessment contexts (Bassett, 2025).

Table 5 quantifies the distribution of these sub-themes. Most institutions referenced student guidelines on GenAI use (30 universities), institutional GenAI policies and principles (24) and staff training (21). Fewer demonstrated embedded capability-building through governance structures (7) or communities of practice (9), highlighting a stronger sector-wide focus on policy articulation than institutional capacity-building, a pattern consistent with the quadrant analysis (Figure 1).

Table 5
Frequency of institutional sub-themes aligned with TEQSA (ethical engagement) (N = 39)

Theme	Sub-themes	*N*
Institutional capabilities	Staff training on GenAI	21
	Access to institutional GenAI tools	20
	Student GenAI literacy initiatives	17
	GenAI-focused communities of practice	9
	GenAI governance	7
Policy frameworks	Student guidelines on GenAI use	30
	Institutional GenAI policy and principles	24
	Staff guidelines on GenAI use	18
	Integration of GenAI in assessment frameworks	17

- Institutional alignment with TEQSA's Principle 2 (ensuring reliable and trustworthy assessments of student competencies)

Document analysis identified two dominant themes reflecting institutional strategies for maintaining valid, reliable and trustworthy assessment practices in the context of GenAI: *GenAI and assessment (re)design* and *GenAI-based assessment and integrity* (see Table 6).

The first theme captures how universities are documenting strategies for revising assessment practices in response to GenAI. The most frequently observed sub-themes were authentic and secure assessment design (21 universities) and process-based assessments emphasising higher-order skills (19), both referencing a shift towards reflection and real-world application over product-focused evaluation. Diversified assessment formats and subject coordinator clarifications were each referenced by 16 universities, while smaller groups referenced facilitation of sharing of exemplars (11), curriculum-level redesign (8), co-created assessments (5) and self-auditing tasks (5). Notably, only one institution referenced cross-institutional learning, highlighting a sector-wide gap in benchmarking. Some institutions also referenced human-in-the-loop models to maintain educator oversight of AI-supported outputs.

The second theme focuses on maintaining fairness and accountability in student submissions. The most documented practice, referenced by 38 universities, involved requiring acknowledgement or citation of GenAI use through declaration templates. Clear guidance on permissible GenAI use was widespread (30 universities), while 21 universities referenced detection tools, though most documents emphasised educational over punitive approaches. A smaller group (8 universities) indicated in institutional documents a requirement for students to explicitly reflect on or document their GenAI usage to foster metacognitive awareness and responsible practice.

Table 6
Frequency of institutional sub-themes aligned with TEQSA Principle 2 (ensuring reliable and trustworthy assessments of student competencies) (N = 39)

Themes	Sub-themes	*N*
GenAI and assessment re(design)	Authentic and secure assessment design	21
	Process focused assessments and higher order skills	19
	Diversified and adaptive assessment formats	16
	Clarification by subject coordinator	16
	Sharing exemplars of practice	11
	Revision at curriculum, unit, discipline level	8
	Support for assessment review decisions	6
	Co-created assessments	5
	Self-auditing GenAI-supported assessments	5
	Learning from other universities	1
GenAI-based assessment and integrity	Acknowledging or referencing GenAI in assessments	38
	Clear guidance on permissible GenAI use	30
	Detection tools for GenAI use	21
	Student reflection on GenAI usage	8

These findings demonstrate that while Australian universities are increasingly documenting GenAI-aware strategies in assessment design and academic integrity frameworks, the depth and consistency of policy articulation remain varied, particularly in relation to governance, cross-institutional collaboration and process-level reforms.

Unaddressed areas in ICT assessment practice

RQ3. What gaps or inconsistencies exist in publicly available institutional documents concerning ethical AI guidance for ICT assessment practices?

The following analysis operated at both the institution level (*N* = 39) and the availability level (*N* = 22). A major gap is the absence of discipline-specific guidance within ICT education. Most institutional documents did not specify how GenAI is to be used, restricted or supported in ICT assessments. While TEQSA's (2024) toolkit provides sector-wide guidance, it is not discipline specific. Few universities document clear protocols for redesigning ICT assessment tasks such as programming assignments, database tasks or algorithmic challenges to mitigate GenAI's automation potential (Luo, 2024; Simon et al., 2022), and discipline-specific lists of endorsed or prohibited GenAI tools are largely absent from publicly available resources.

CQUniversity (2025) was the only institution among all 39 universities to publish an ICT-specific GenAI Toolkit. Broader questions remain unanswered in the publicly available record: How are rubrics being redesigned for ICT? Who leads assessment redesign in ICT faculties? Are specific GenAI tools endorsed or discouraged? The absence of documented GenAI integration into ICT curriculum design and assessment development suggests a potential risk to both academic integrity and pedagogical innovation, making discipline-specific intervention an urgent priority.

Discussion

The findings of this study revealed both significant documented commitments and unresolved gaps in institutional policy alignment with TEQSA's Principles 1 and 2 in the era of GenAI. This discussion contextualises these findings within the broader literature, highlighting both areas of convergence and divergence with prior research. The documents analysed reflect institutional intentions and communication strategies rather than verified practice. Policy commitments documented publicly do not necessarily translate to consistent implementation at the programme, unit or classroom level. Conclusions drawn from our study should therefore be interpreted as indicative of institutional positioning rather than actual assessment practice.

Institutional policy responses to GenAI in assessment

The finding that 34 out of 39 Australian universities (87.2%) demonstrated high alignment with both TEQSA principles reflects a sector that is increasingly proactive in its public policy positioning on GenAI in assessment. This is broadly consistent with McDonald et al. (2025), who found that institutions internationally are beginning to move beyond reactive, ad-hoc responses towards more structured, policy-driven frameworks. However, where McDonald et al. identified considerable variation in the depth and coherence of institutional responses across different national contexts, our study suggests that Australian universities guided by TEQSA's regulatory framework demonstrate a comparatively higher degree of policy alignment. This convergence is consistent with institutional isomorphism (DiMaggio & Powell, 1983): TEQSA's normative framework functions as a coercive mechanism that drives mimetic adoption of similar policy responses across institutions, regardless of their internal capacity to operationalise them. Consequently, high alignment scores may reflect performative compliance with regulatory expectations rather than substantive institutional readiness – a distinction that the document-based methodology of our study cannot fully resolve.

The strong presence of public-facing policy documents referenced staff training programmes and stated student guidance across Australian institutions also aligns with Moorhouse et al.'s (2023) observation that universities are increasingly recognising GenAI not merely as a threat to academic integrity but as a pedagogical opportunity requiring deliberate institutional support. However, Moorhouse et al. cautioned that most institutional responses remain focused on general pedagogical implications rather than discipline-specific or structural reforms – a pattern that is strongly echoed in our study, particularly with respect to ICT education.

Fragmented policy implementation

Despite overall high alignment scores, the analysis uncovered fragmented policy implementation across institutions. GenAI references frequently appear in integrity or misconduct policies but are not integrated into assessment design frameworks or curriculum governance. This siloed approach mirrors findings from McDonald et al. (2025), who noted that institutional policies frequently address academic integrity in isolation from broader assessment redesign, leaving frontline educators without operational guidance. Our study extends this to the Australian context, demonstrating that while policy articulation is widespread – with 30 universities publishing student guidelines and 24 documenting institutional GenAI policies – embedded capacity-building efforts such as formal governance structures (7 universities) and communities of practice (9 universities) remain comparatively rare. From a socio-technical systems perspective (Trist, 1981), this fragmentation reflects a mismatch between technological change and organisational readiness: GenAI has disrupted assessment practice faster than governance infrastructure can respond. Weick's (1976) concept of loose coupling further explains why institutional-level mandates remain decoupled from classroom practice without deliberate bridging mechanisms such as discipline-level communities of practice or structured curriculum review, policy documents and teaching reality operate in parallel rather than in concert. This fragmentation is further evidenced by Atif et al. (2025), who identified three divergent institutional response trajectories across the same data set, namely compliance-centric, strategically aligned and fragmented innovators, reflecting similarly uneven patterns of policy coherence and operational capacity.

Absence of ICT-specific strategies

A key finding of our study is that discipline-specific strategies for ICT education are largely absent from publicly available institutional documents across Australian universities. Despite the well-documented vulnerability of ICT assessments such as programming tasks, database design and algorithm development to GenAI automation, most institutional documents lacked explicit discipline-specific guidance. This finding is consistent with Elkhodr et al. (2023), who found that students frequently used ChatGPT to complete algorithmic tasks without fully understanding the underlying design process. Our study demonstrates that this problem is compounded at the institutional level: not only are students engaging with GenAI in ways that may compromise authentic learning, but institutional documents also largely fail

to provide the discipline-specific frameworks needed to guide educators and students in ICT assessment contexts. However, these conclusions are inferred from institutional-level documentation rather than directly evidenced through ICT-specific sources and should be interpreted accordingly.

Assessment redesign and integrity practices

Institutional documents indicate that Australian universities are increasingly committing to GenAI-aware strategies in assessment design, with 38 universities referencing acknowledgement of GenAI use in submissions and 21 documenting authentic and secure assessment design as a stated priority. These findings align with Moorhouse et al.'s (2023) call for assessments that move beyond product-focused evaluation towards process-based and higher-order tasks more resistant to GenAI automation, providing evidence that this shift is reflected in institutional policy commitments across Australia. The widespread reference to GenAI detection tools (21 universities) must be interpreted cautiously, however. As Elkhodr et al. (2023) and Chugh, Turnbull, et al. (2025) have highlighted, detection-based approaches are inherently reactive and insufficient as standalone strategies given the rapidly evolving capabilities of GenAI tools. Viewed through Messick's (1989) framework of construct validity, detection-centred governance risks measuring the wrong construct – policing compliance rather than evaluating authentic competence. The sector's documented preference for educational over punitive responses reflects a more validity-conscious orientation in institutional policy, aligning stated assessment governance priorities with what GenAI-resilient education actually requires.

Limitations

Several limitations must be acknowledged when interpreting the findings. First, the analysis is time bound, reflecting institutional documents collected between April and May 2025. To mitigate this, all documents were archived as PDFs with metadata including retrieval and publication dates recorded for transparency and future replicability. Where institutional web pages were publicly accessible at the time of collection but have since been restricted or relocated due to website updates or institutional changes, archived PDF copies were retained and are available upon request. The 2-month collection window, while sufficient to capture publicly available documents at a fixed point in time, was not intended to track policy evolution and may not reflect institutional responses published after May 2025.

Second, the study relied exclusively on publicly available documents, excluding internal, intranet and faculty-level resources. While this ensured consistency in data sourcing, it inevitably omitted granular insights into programme-level or school-level innovations within ICT faculties. A follow-up mixed methods study incorporating surveys and interviews is planned to complement the current data set.

Third, and most significantly, the majority of institutional documents were not specific to ICT education. Most were generic university-wide policies on academic integrity, assessment design and ethical AI use, lacking targeted guidance on how GenAI affects technical assessments such as programming, software engineering or data science tasks. As a result, the ICT-specific analysis in this study is necessarily limited to institutional-level observations rather than discipline-level insights into how GenAI is being managed within ICT programmes and units. This reflects a broader sector-wide issue, as many institutions have yet to develop discipline-specific operational guidelines (Elkhodr et al., 2023; Jha et al., 2025; Luo, 2024), and means that conclusions about ICT assessment practice are inferred from general policy documents rather than directly evidenced through ICT-specific sources. CQUniversity's (2025) ICT-specific GenAI Toolkit was a notable exception.

Fourth, the scoring verification process involved one of us independently scoring qualitative observations documented by another, rather than independently coding the original institutional documents. Moreover, no formal reliability coefficient such as Cohen's Kappa was calculated, as discrepancies were resolved through reflective discussion until consensus was reached. While this strengthened scoring consistency and reduced interpretation bias, the dependability of scores rests on the rigour of the consensus process rather than a quantifiable agreement statistic, and findings should be interpreted

accordingly as preliminary rather than definitive classifications. Where documents contained ambiguous or apparently contradictory statements, final scores reflecte the predominant weight of evidence across all available institutional documents rather than any single source. Future studies should employ full dual-coding protocols from the point of initial document review and report formal inter-rater reliability coefficients.

Fifth, while the study aimed for full population coverage of Australian universities offering ICT programmes, the sample is dominated by huge and large institutions under Alsmadi and Taylor's (2018) classification, with only one small institution represented and no medium institutions. Generalisability beyond large Australian universities offering ICT programmes cannot be assumed.

Sixth, alignment scores derived in this study are based exclusively on publicly available institutional documents and reflect what universities formally articulated at the time of collection rather than what is currently enacted in practice, noting that some documents retained for scoring were outdated at the time of retrieval. Furthermore, public-facing documents may be deliberately aspirational or strategically vague, meaning that institutions with more detailed publicly available policies do not necessarily demonstrate stronger implementation than those with less elaborate documentation. High alignment scores should therefore be read as indicators of institutional positioning rather than confirmation of consistent implementation.

Seventh, the concentration of 34 out of 39 institutions in the top-right quadrant suggests the scoring rubric may lack sufficient discriminatory power to capture meaningful variation within the high-alignment group. Future studies should consider more granular scoring instruments or continuous rather than ordinal scales to better differentiate institutional responses or complement alignment scoring with typological approaches such as the foresight-based trajectories developed by Atif et al. (2025) using the same data set.

Significance, future directions and conclusion

This study provides the first systematic, national-level analysis of Australian university alignment with TEQSA's guiding principles for GenAI in assessment, offering a baseline against which future policy developments can be measured. By applying a structured scoring rubric across 39 institutions, it moves beyond descriptive accounts of individual institutional responses as characterised by much of the literature (McDonald et al., 2025; Moorhouse et al., 2023) to provide a comparative, evidence-based view of sector-wide alignment, a pattern consistent with institutional isomorphism (DiMaggio & Powell, 1983), whereby regulatory frameworks drive policy convergence independently of operational capacity. This study is complemented by Atif et al. (2025), who applied a foresight-oriented lens to the same data set to construct speculative institutional trajectories, together offering both a regulatory alignment baseline and a forward-looking framework for sector-wide planning. The discipline-specific focus on ICT education addresses a gap explicitly identified in the literature (Chugh, Morshed, et al., 2025; Chugh, Turnbull, et al., 2025; Elkhodr et al., 2023), raises important questions about the adequacy of current institutional frameworks for protecting the integrity and authenticity of technical assessments and suggests that institution-level alignment scores alone are insufficient as a measure of genuine AI-readiness in assessment.

The findings reveal encouraging momentum towards ethical and responsible GenAI use, demonstrated through policy frameworks, student guidelines and early assessment redesign initiatives. However, policy fragmentation, inconsistencies in implementation and limited ICT-specific integration reflect a structural consequence of technological disruption outpacing governance infrastructure (Trist, 1981; Weick, 1976) rather than institutional failure per se and indicate that institutional maturity in this area is still emerging. To support further development, institutions should consider (a) designing integrated frameworks that connect assessment design, academic integrity and GenAI ethics; (b) investing in ICT-specific staff and student training on GenAI capabilities and risks; and (c) clarifying expectations around permitted GenAI

tools and feedback mechanisms. Cross-institutional collaboration and benchmarking, currently evidenced by only one university in this study, will also be critical for driving consistent, sector-wide improvement.

Future research should explore how these policies are implemented at the programme and unit or subject levels, especially in ICT education. Triangulation through mixed methods approaches, including staff interviews, student surveys, and classroom observations as well as targeted collection of ICT-specific data such as unit or subject-level assessment information and discipline-specific learning outcomes, would help verify whether publicly stated institutional commitments translate into actual assessment practice, supporting more context-responsive and pedagogically sound approaches to AI-informed assessment.

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Appendix

Table A

Codebook with scoring exemplars for TEQSA Principles 1 and 2

Score	Principle 1 (preparing students to engage ethically in an AI-driven world) exemplar text	Principle 2 (ensuring reliable and trustworthy assessments of student competencies) exemplar text
3	"We will maintain our commitment to excellence and integrity in teaching, learning, assessment and research as the applications of AI in university settings evolve." (Institutional AI Principles)	"We will communicate clear guidance on the responsible and ethical use of AI technologies for our staff and for our students, and we will be explicit where rules or expectations differ according to discipline or role." (Institutional AI Principles)
2	"For each assessment task, you need to inform students: (1) whether the use of GenAI technology is acceptable or prohibited; (2) where GenAI use is acceptable, define the limits of use; (3) the use of GenAI tools beyond defined acceptable limits may result in an academic integrity breach." (Institutional GenAI Teaching Resource)	"The Assessment Adaptation Model-GenAI (AAM-GenAI) provides a step-by-step guide for considering GenAI in the assessment design cycle, incorporating current practice recommendations and policy requirements for academic integrity and assessment." (Institutional GenAI Teaching and Learning Guide)
1	"The use of GenAI in learning, teaching and assessment is required to be ethical, pedagogically sound, transparent and purposeful." No specific AI in assessment framework was identified among documents reviewed. (Institutional GenAI Guidance)	"Review your subject's learning outcomes and assessment strategy. Do the learning outcomes reflect the activities graduates will do in the workplace? The more you can contextualise to the workplace the greater your chance of minimising the potential for students to show their attainment of learning outcomes even if they use GenAI tools without approval." (Institutional Ethics and Assessment Integrity Resource)
0	No mention of AI-related ethics, responsibility, digital integrity, or academic values found in documents reviewed.	No reference to assessment quality, reliability, competencies, or learning outcomes found in documents reviewed.

Note. Exemplars were drawn from publicly available institutional documents retrieved between April and May 2025. University names have been withheld. Full source details are available from the authors upon request.