

AI-Managed Universities and Colleges: Legal Standing, Global Recognition of Qualifications, and the Case for Reform in Professional and Postgraduate Education

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ARTICLE INFORMATION	ABSTRACT
Article history: Published: October 2026 Keywords: Artificial Intelligence Higher Education Qualification Recognition Academic Governance Professional Education Postgraduate Education	Universities and colleges are adopting generative artificial intelligence (AI) in teaching, assessment and administration, yet legal and qualification-recognition systems were designed for human-delivered education. To examine how human-managed, AI-enabled institutions fit within legal, accreditation and recognition systems, with attention to professional and postgraduate awards, and to propose a model for reform. A narrative review of legislation, treaties, accreditor and regulator publications, and indexed literature, identified through targeted searches in October 2026. Five findings emerged. Regulators converge on human accountability for AI tools. High-stakes uses such as admissions and assessment attract the strictest legal controls, notably under the European Union AI Act and section 71 of South Africa's Protection of Personal Information Act. Recognition instruments, including the UNESCO Global Convention, rest on quality assurance and comparability and do not yet address AI-mediated delivery. Recent accreditor and ISO developments (AACSB, ABET, the American Accreditation Association, ISO/IEC 42001, ISO/IEC 17024:2026) address AI governance, curricula and certification, but none links institutional AI governance to a portable record of how each graduate's competence was demonstrated. Evidence from health professions education shows that AI performs well on knowledge tests but may weaken skills that regulators must certify. AI-managed institutions can be credible if accountability, secure assessment and verifiable credentials are built in. The author proposes Human-Accountable AI Education (HAIE), a two-key accreditation model that combines an AI autonomy ladder for institutional functions with a portable competence provenance record issued with qualifications, alongside a staged reform framework.

1. Introduction

Generative AI tools have entered higher education faster than regulation has adapted. UNESCO's first global guidance on the subject observed that national rules were absent in most countries, leaving user data unprotected and institutions largely unprepared to validate the tools [1]. In South Africa, the Council on Higher Education has recognised that higher education is not immune to AI, with student support and virtual teaching assistants among the areas of fastest growth [2]. A collective study of 51 South African academics likewise shows that the interplay between generative AI, learning design, assessment and social justice is contested rather than settled [3]. The stakes are highest in professional degrees and postgraduate study, where a qualification is more than an academic record: it is the basis on which a regulator licenses a person to practise. Reviews in health professions education report that large language models can match human practitioners on board-style examinations, while also raising concern that AI may undermine the knowledge and skills needed for professional work [4]. Practitioners remain professionally responsible for verifying AI-generated output [5]. Two bodies of law and policy therefore meet the AI-enabled institution. The first governs how AI may be used on people: the European Union (EU) AI Act [6] and South Africa's Protection of Personal Information Act (POPIA) [7] are leading examples. The second governs whether a qualification earned in one place will be trusted in another, notably the UNESCO Global Convention on the Recognition of Qualifications concerning Higher Education [8]. Neither was written with an AI-enabled, human-managed institution in mind.

1.1 Research problem

It is unclear whether a university or college that uses AI extensively in teaching, but keeps people accountable for decisions, remains fully compatible with these legal and recognition frameworks, and where reform is needed.

1.2 Objective

This review (i) describes how AI is being integrated into human-managed higher education institutions, (ii) examines the legal, accreditation and quality-assurance frameworks that apply, including recent United States accreditor developments, the American Accreditation Association and ISO standards, (iii) analyses implications for the global recognition of qualifications, particularly professional and postgraduate awards, and (iv) proposes a new model and a framework for change.

1.3 Key terms

Three decisions are easily confused. Accreditation is a quality-assurance judgement about an institution or programme. Recognition is a decision by an authority that a qualification is comparable with a national one [8]. Licensing is a regulator's permission to practise a profession. A qualification can pass one test and fail another, so AI-mediated delivery must be examined at all three levels.

1.4 Structure of the review

Section 2 describes the methods. Section 3 first defines the AI-managed institution (3.1), then reviews teaching and assessment (3.2), the legal framework (3.3), qualification recognition (3.4), professional and postgraduate study (3.5), United States accreditation (3.6), ISO standards (3.7) and the American Accreditation Association (3.8). It then proposes a new model (3.9) and a reform framework (3.10), stress-tests both against evidence and context (3.11), sets out an implementation roadmap (3.12) and a research agenda (3.13), reviews emerging evidence and policy developments (3.14), and closes with limitations (3.15). Section 4 concludes.

2. Materials and Methods

2.1 Design

This is a narrative review with a policy and legal-analysis component. It is not a systematic review, and no meta-analysis was attempted.

2.2 Sources and search

Targeted web and database searches were run in October 2026 across seven themes: (i) AI governance in higher education; (ii) AI-related law and regulation affecting education, with emphasis on the EU and South Africa; (iii) recognition and verification of qualifications; (iv) AI in health professions education as a proxy for regulated professional degrees; (v) accreditor standards and policies on AI, with emphasis on the United States; (vi) ISO and IEC standards for management systems, accreditation and certification; and (vii) evidence on learning and academic integrity, research-publishing guidance, and professional regulation in dentistry and health care. Priority was given to primary instruments (statutes, treaties, and regulator, accreditor, standards-body and intergovernmental publications), then to peer-reviewed and indexed reviews, then to institutional case studies.

2.3 Selection

Items were included if they directly addressed AI in higher education, a relevant legal or regulatory instrument, or the mechanics of qualification recognition. Duplicate and promotional material was excluded. Several peer-reviewed items were available only as abstracts or provisionally accepted manuscripts and are cited at that level of detail.

2.5 Analysis

Content was synthesised thematically into seven domains: institutional governance, teaching and assessment, legal compliance, accreditation and ISO standards, qualification recognition, professional and postgraduate education, and implementation evidence. The HAIE model (Section 3.9) and the reform proposals (Section 3.10) are the author's own synthesis and are labelled as such. Where primary accreditor documents could not be opened, secondary or commercial sources were used and are flagged in the text.

2.6 Ethical considerations

The review used only published and publicly available documents. No human participants or personal data were involved, so ethical approval and informed consent were not required.

2.7 Limitations of method

Searches were not exhaustive, no formal quality appraisal was applied, and the field is changing quickly; regulatory dates and instruments should be re-verified before reliance.

3. Results and Discussion

3.1 What an AI-managed institution means

In this review, an AI-managed institution is one in which AI systems perform or support core functions (tutoring, feedback, content generation, admissions triage, analytics) while named people keep authority and accountability for outcomes. This is the model UNESCO endorses: a human-centred vision in which institutions validate the ethical and pedagogical appropriateness of AI systems before use [1]. The University of KwaZulu-Natal's academic guidelines, described as among the first comprehensive institutional frameworks in Africa, show how such principles can be operationalised through rules on transparency, authorship, disclosure and academic integrity [9]. "AI-managed" is therefore best read as AI-assisted and human-accountable. None of the instruments reviewed here contemplates a fully autonomous institution.

3.2 Teaching and assessment

Generative AI has aggravated existing assessment problems, but Australia's regulator, TEQSA, stresses that evidence-based expertise on assessment design for a digital world already exists and can be applied [10]. Its chief commissioner wrote to providers advising that TEQSA would seek assurance that plans exist to address the academic-integrity risk [10]. A later TEQSA resource argues that effort should move away from an arms race in detection towards systemic redesign, including program-wide reform with multiple secure assessment points that build towards program outcomes, and notes TEQSA's transition to a regulatory approach to AI risks to integrity in 2026 [11]. South African findings point the same way: a study of formative assessment reports that easy access to generative AI tempts students to seek solutions rather than apply full effort, and calls for new assessment planning [12]. In health professions education, a scoping review of 21 studies concluded that integration needs a structured, proactive approach so that AI supports critical thinking and professional judgement rather than compromising core clinical and professional competencies [13]. A systematic review has begun to map how health professions students actually use generative AI against Laurillard's six learning types [14]. Together, these sources suggest that the defensible position is neither prohibition nor unrestricted use. Assessment must be redesigned so that competence can be evidenced under secure conditions, while AI use is taught, supervised and disclosed.

3.3 Legal framework

EU AI Act. The Commission's guidance explains that AI systems used in education are treated as high-risk because they may determine a person's educational and professional course and their ability to secure a livelihood [15]. High-risk uses include

determining access or admission and assigning people to institutions, and even an admissions decision-review tool designed only to support quality control, not to replace human assessment, appears among the Commission's examples [15]. Annex III also covers evaluating learning outcomes, assessing the appropriate level of education for an individual, and monitoring students for prohibited behaviour during tests [16]. An institution deploying such a tool is a deployer and carries its own obligations even where the vendor has completed its conformity assessment [16]. Application dates for Annex III systems were reported as 2 August 2026, with 2 December 2027 also listed [16]; the current position should be verified before reliance. The Act also prohibits inferring the emotions of students in education settings, with narrow medical and safety exceptions [6].

South Africa (POPIA). Section 71 provides that a person may not be subject to a decision with legal consequences, or one that affects them to a substantial degree, based solely on automated processing intended to profile them, including their performance or conduct. Exceptions apply where appropriate measures protect the person's interests, and those measures must give an opportunity to make representations and sufficient information about the underlying logic of the processing [7]. An automated decision on progression, exclusion or misconduct would plausibly fall within this concern. A comparative analysis of section 71 and the EU General Data Protection Regulation argues that POPIA could be strengthened for AI-driven decision-making [17].

Common design rule. Across these instruments, decisions that shape a person's educational or professional future should keep a human decision-maker, an explanation and a route to challenge. UNESCO reaches a related position on data privacy, urging governments to mandate its protection and to consider age limits for generative AI tools [1].

3.4 Global recognition of qualifications

The UNESCO Global Convention was adopted in November 2019 and rests on the right of individuals to have their qualifications assessed fairly, with recognition granted unless a substantial difference can be shown, and with duties on states to maintain robust quality assurance [8,18]. Digitalisation is not directly mentioned in the Convention, yet it opens the door to recognising qualifications, partial studies and prior learning obtained through online and other digital modes, and it points to secure digital certification and the right of appeal [19].

In South Africa, the South African Qualifications Authority (SAQA) evaluates foreign qualifications in two phases: verification that the qualification was legitimately issued and forms part of the issuing country's system, then comparison of structure and outcomes to locate it within the National Qualifications Framework [20]. The Southern African Development Community's recognition manual adds guidance on verification and comparability, including for qualifications awarded through unconventional arrangements and by unrecognised institutions [21].

It follows that recognition regimes ask two questions: is the awarding institution legitimate and quality-assured, and are the learning outcomes comparable? An AI-managed institution can satisfy both, but only if its human governance and the integrity of its assessment are visible to evaluators. Legal status and accreditation, not delivery mode, are what verification tests.

3.5 Professional degrees and postgraduate study

Professional degrees add a third gatekeeper, the licensing body. In South Africa, professional bodies may require a SAQA evaluation of a foreign qualification before a person is allowed to practise [22]. An AI-mediated programme must therefore persuade regulators that graduates are competent, not only that the institution is recognised.

The evidence suggests competence is where the risk lies. Because large language models can match human practitioners in board-style examinations, examination performance alone becomes a weaker signal of a graduate's own competence, and reviewers warn of challenges that may undermine the acquisition of knowledge and skills for professional work [4]. A narrative review proposes AI-integrated professionalism, in which clinicians remain responsible for reviewing and verifying AI outputs before they are used in patient care [5].

For postgraduate study, the dissertation or manuscript is the main evidence of independent scholarship, so authorship and disclosure rules [9] and program-level assessment redesign [11] become central. Staged supervision and oral defence arguably make independent work harder to outsource than a single final document.

3.6 Accreditation developments in the United States

Accreditation in the United States is delivered by many regional, institutional and specialised bodies rather than by a single association. Some private accreditors of training providers, notably the American Accreditation Association (Section 3.8), now also accredit AI courses. The developments fall into three groups: AI competence written into programme standards, rules on how accreditors themselves may use AI, and guidance for accredited providers.

AI in programme standards. The 2026 AACSB Global Standards for Business Education state that digital literacy is essential for business leadership, and Standard 4.3 requires curricula to cultivate the responsible and ethical use of technology. The standards text does not use the term "AI" [23]. AACSB's consultation described a Learner Success area that strengthens expectations for curriculum, assurance of learning and digital agility [24]. Implementation is staged, with about 30 volunteer pilot schools in 2026-27 and the 2026 standards effective from 2027-28 [23]. Commercial commentary presents digital agility as a formal requirement covering AI literacy, critical interpretation of AI outputs and documented learning outcomes [25]; because that source sells AI training and describes a proposal, it is treated cautiously here. ABET's adopted 2026-2027 computing criteria contain no AI-specific requirements, but a proposed criterion for AI programmes would require graduates to design and implement AI-based solutions and at least 42 semester credit hours of AI coursework, first applying in the 2027-28 review cycle [26].

Guidance for accredited providers and accreditors. In continuing medical education, the ACCME guidance of 30 January 2026 expects providers to disclose AI use, to have named qualified people review fixed materials before release, to protect personal data, to avoid high-risk uses such as unvalidated diagnostic or treatment recommendations, and to keep governance measures such as an approved tool list [27]. The Middle States Commission on Higher Education and the Council for Higher Education Accreditation have issued a policy and guiding principles for the use of AI within accreditation itself, centred on lawful, transparent and human-controlled use [28].

What these developments leave open. First, AI mostly enters accreditation as a curriculum outcome or a governance duty, not as verification that a given graduate's competence is their own. Second, commentators warn that polished artefacts are no longer reliable proof of learning, citing OECD evidence that generative AI can improve performance without producing genuine learning gains [28]. Third, none of these instruments links accreditation to cross-border recognition: an accredited, AI-literate curriculum tells a recognition authority little about how a particular graduate's competence was demonstrated. These gaps motivate the model in Section 3.9.

3.7 ISO standards and the conformity-assessment route to accreditation

Beside education-specific accreditors, a parallel system built on International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) standards accredits and certifies organisations and people. Four standards matter for AI-managed education (Table 1).

Table 1. ISO and IEC standards relevant to AI-managed education.

Standard	What it covers	Relevance to AI-managed education
ISO/IEC 17011:2017 [29]	Competence, consistent operation and impartiality of bodies that accredit conformity assessment bodies	Test of whether an accreditor or audit body is itself credible
ISO 21001:2018, with a 2025 edition [30,31]	Management system for educational organisations	Auditable governance of educational services, including ethical conduct and data security
ISO/IEC 42001:2023 [32]	Management system for organisations that provide or use AI systems	Auditable governance of AI used in teaching, assessment and administration
ISO/IEC 17024:2026 [33]	Bodies that certify individuals, with new requirements on AI use, human oversight and validation of AI outcomes	Template for evidencing individual competence under AI conditions

ISO 21001 applies to any organisation that uses a curriculum to provide, share and transfer knowledge, and rests on principles that include evidence-based decisions, ethical conduct in education, and data security and protection [30]. The 2025 edition is listed as valid from 7 July 2025, and the 2018 edition with its 2024 amendment is listed as withdrawn from 18 May 2026 [31]. ISO/IEC 42001 was published on 18 December 2023 and applies to any organisation, of any size, that provides or uses AI-based products or services [32]. ISO/IEC 17024:2026 was published on 31 March 2026; this edition adds requirements on AI in certification, including monitoring and validating AI-generated outcomes, maintaining human oversight and ensuring staff competence with AI tools [33]. The route has two strengths. ISO 21001 and ISO/IEC 42001 give auditors a common, country-neutral checklist for institutional governance of AI. ISO/IEC 17024:2026 shows that standard-setters are already writing human oversight of AI into competence certification. It also has a limit, which is the author's assessment: conformity to a management-system standard shows that an organisation operates a system to its own stated policies. It does not, by itself, show that outcomes are at degree level or that a state authority will recognise the award, which under the Global Convention and national frameworks rests on state-recognised quality assurance and comparison of outcomes [8,20].

3.8 The American Accreditation Association (AAA)

The American Accreditation Association (AAA) is an accreditation body based in Tysons Corner, Virginia, with international operations [34]. Its website describes programmes built on ISO and IEC standards. These cover Training and Education Providers (including a programme for small and medium-sized enterprises), healthcare including medical laboratories under ISO 15189, conformity assessment bodies (testing laboratories, personnel certification bodies under ISO/IEC 17024, system certification bodies, product certification bodies, inspection bodies and proficiency testing providers), and training providers under ASTM E2659 [34]. Its listed roles include accreditation services, individual and organisational membership, an academy, advisory technical committees and an accredited personnel directory [34].

Role in AI education. A news item on the AAA website reports that a Dubai-based AI training company was accredited as a Training and Education Provider for courses including generative AI essentials, AI for executives and AI for human resources [34]. The website describes no AI-specific accreditation programme or AI requirement and does not set out the criteria applied to AI content [34]. On the evidence reviewed, AAA therefore accredits AI training providers within its general training-provider programme; it was not found to have added AI training to its requirements.

Status and cautions. The website states that AAA is recognised by the Government of the United States but does not name the agency [34]. AAA does not appear on the US Department of Education's lists of recognised institutional or programmatic accrediting agencies [35,36]. Its accreditation is therefore best understood as ISO-based conformity assessment of training providers and certification bodies, not as institutional or programmatic accreditation of degree-granting institutions in the US federal sense. For dentistry, for example, the recognised programmatic accreditor is the American Dental Association's Commission on Dental Accreditation [36]. The AAA page reviewed also showed placeholder statistics and unrelated promotional text, so its claims should be confirmed with AAA directly before they are relied on [34].

Where AAA fits. AAA and similar bodies are most relevant to short courses, continuing professional development and micro-credentials in AI, and could supply Key 1 style audits of non-degree providers. They do not replace state-recognised quality assurance for degrees, and recognition authorities and professional councils should check how far they accept ISO-based accreditation before relying on it.

3.9 A new model: Human-Accountable AI Education (HAIE)

The sources reviewed contain governance guidance, curriculum outcomes and recognition procedures, but these are not connected to one another or to evidence of individual competence. This section proposes Human-Accountable AI Education (HAIE) to connect them. It is the author's original proposal. To the author's knowledge, and within the sources reviewed, no accreditor or recognition instrument currently ties limits on institutional AI autonomy to a portable, per-competency record. The model is therefore a hypothesis to be tested, not an established practice.

Component 1: the AI Autonomy Ladder. Institutions classify each AI-supported function on five levels, by analogy with the automation levels used in other safety-critical fields (Table 2).

Table 2. The AI Autonomy Ladder for institutional functions.

Level	AI role	Required human role	Examples
0	None	Full human delivery	Oral examinations; assessment of clinical work on patients
1	Assists	Human performs the task; AI is an optional, disclosed aid	Drafting aids; literature search
2	Recommends	Human decides and records reasons	Admissions triage; feedback on drafts
3	Acts within limits	Human samples outputs and can reverse them	Routine tutoring; formative marking
4	Acts without routine review	Oversight by periodic audit only	Timetabling; administrative scheduling

The governing rule is that admissions, progression, summative assessment and award decisions are capped at Level 2. This keeps a human decision-maker, an explanation and a route to challenge, consistent with the EU AI Act's high-risk treatment of education [15] and section 71 of POPIA [7].

Component 2: the Competence Provenance Record (CPR). This is a verifiable digital record issued with the qualification. For each graduating competency it states the assessment method, whether the assessment was observed or unobserved, the declared AI-use band (none, assisted or co-produced) and the accountable human assessor. It works like a nutrition label for a qualification. Its logic can follow ISO/IEC 17024:2026, which requires human oversight and validation of AI-generated outcomes in the certification of persons [33]. It builds on the secure digital certification and right of appeal that the Global Convention's digital agenda points to [19], so that recognition authorities and licensing councils read evidence instead of inferring it. In dentistry or medicine, for example, procedural clinical competencies would be recorded as observed on patients with an AI-use band of none or assisted, whereas a literature-review assignment might be recorded as co-produced with disclosure.

Component 3: two-key accreditation. Key 1 audits institutional governance: compliance with the Autonomy Ladder, privacy and legal conformity. ISO 21001 and ISO/IEC 42001 can supply the audit basis for the management-system elements [30,32]. Key 2 audits programme competence assurance: whether the CPR shows that the competencies a profession treats as essential were evidenced under observed or secure conditions. Thresholds would be set by each professional council, not by this review. An institution would need both keys, because strong governance without secure assessment, or the reverse, would not suffice.

Component 4: mutual recognition of audits. Accreditors and recognition authorities would accept one another's Key 1 audits, while each licensing council keeps control of Key 2. ISO/IEC 17011 already defines competence, consistent operation and impartiality for accreditation bodies [29], and verification networks already cooperate in this way: the African Qualification Verification Network, facilitated by SAQA, was formed to build trust and promote genuine qualifications through effective verification [37].

Component 5: pilot first, then review. Following the staged approach AACSB is using [23], HAIE should be piloted with a small number of programmes and reviewed every two to three years.

Testable propositions.

- P1: Programmes issuing a CPR will generate fewer verification queries and faster recognition decisions than comparable programmes without one.
- P2: Observed-assessment coverage of essential competencies will predict early professional performance better than coursework grades produced under unrestricted AI use.
- P3: Capping decision-making functions at Level 2 will not materially reduce the efficiency gains from AI in feedback and student services. A pilot in dental and medical programmes would be a suitable first test.

Risks and trade-offs. A CPR holds personal information about students, so its design must comply with data protection law such as POPIA [7]. Record-keeping and observed assessment add cost, which could disadvantage under-resourced institutions, an equity concern raised in South African discussion of generative AI [3]. Declared AI-use bands also rely on honest disclosure, so Key 2 audits must sample evidence, not accept declarations at face value.

3.10 Proposed framework for change

Building on the HAIE model in Section 3.9, the following framework is the author's synthesis of the sources above and is offered for debate and testing, not as established finding.

Table 3. Proposed reform framework for AI-managed higher education institutions.

Domain	Gap identified	Proposed change
Institutional governance	AI use is typically addressed through guidelines, as in the UKZN example [9]	Publish an AI governance policy naming accountable officers, approving tools only after ethical and pedagogical validation [1], and keeping a register of AI uses
Assessment	Knowledge tests no longer separate human competence from AI output [4]	Program-wide redesign with secure assessment points [11]; direct observation, oral defence and supervised practice in professional programmes

Domain	Gap identified	Proposed change
Automated decisions	Solely automated decisions affecting students are restricted by law [6,7]	Human review, explanations and appeal routes for admissions, progression and misconduct decisions; impact assessment before deployment
Quality assurance	Regulators are moving from guidance to regulation [11]	Quality-assurance bodies add AI governance and assessment-security criteria to institutional and programme reviews
Qualification recognition	Recognition instruments do not directly address digital delivery [19]	Recognition authorities judge programmes on governance, assessment integrity and outcomes rather than delivery mode, supported by secure digital credentials [19]
Professional councils	Licensing relies on qualifications that AI may have shaped [4,22]	Define AI-use competencies and require verified, supervised practical assessment before registration
Postgraduate research	Authorship of AI-assisted dissertations and manuscripts is hard to verify	Staged supervision, mandatory AI-use disclosure and oral examination

3.11 Stress-testing the framework against evidence and context

The HAIE model and the framework in Section 3.10 rest on assumptions about learning, integrity, regulation and equity. This section tests them against the evidence located in this review.

Learning with and without AI. A field experiment with nearly 1,000 high school mathematics students found that access to a GPT-4 tutor improved practice performance, but students who had used an unrestricted version scored 17% lower than students who never had access once the tool was removed [38]. A version built with learning safeguards improved practice performance by 127% and largely avoided that harm [38]. The study concerns secondary schooling, so transfer to professional education is unproven. The implication for HAIE is twofold: the Autonomy Ladder should specify pedagogical guardrails, not only human oversight, and performance under AI access should not be read as unaided competence, which supports proposition P2.

Integrity and the limits of detection. Widely used GPT detectors consistently flagged writing by non-native English speakers as AI-generated while classifying native writing accurately, and the authors caution against using them in evaluative or educational settings [39]. This is consistent with TEQSA's call to move from detection to assessment redesign [11], and it matters in multilingual settings such as South Africa. For HAIE, the Competence Provenance Record should rest on observed assessment and process evidence, not on detector scores.

Research integrity and authorship in postgraduate work. The Committee on Publication Ethics states that AI tools cannot be authors, that authors should disclose which tool was used and how in the Materials and Methods, and that authors remain accountable for the whole manuscript [40]. The ICMJE Recommendations, updated in January 2026, add that authors should describe AI use in both the cover letter and the manuscript, report writing assistance in the acknowledgments, and describe AI use in data analysis in the Methods, while reviewers must not upload manuscripts to AI tools where confidentiality cannot be assured [41]. Postgraduate programmes can adopt the same disclosure norms for dissertations and examiner reports, and the AI-use bands in the CPR (none, assisted, co-produced) map directly onto these journal expectations.

Professional regulation and dental education. A scoping review of 17 empirical studies on AI in dental education identified applications in preclinical training, diagnostic and radiographic training, assessment and feedback, and content generation, alongside risks of over-reliance, privacy and accountability concerns, and limited faculty training [42]. It found little research on real-time AI assessment of procedural skills such as cavity preparation [42]. Procedural competencies should therefore stay at Level 0 or 1 on the Autonomy Ladder and be evidenced under observation. On the legal side, a South African analysis argues that the treating practitioner remains responsible for AI-assisted decisions, that the Health Professions Council of South Africa's ethical guidelines were built around telemedicine and do not contemplate AI as a collaborator, and that the country had no AI-specific laws or overarching AI strategy at the time of writing in 2022 [43]. The current position should be verified, but the underlying point stands: professional councils, not institutions alone, must define AI-use competencies for graduates.

Equity and the Global South. UNESCO identifies risks to equity, inclusion and linguistic and cultural diversity [1], and the UKZN case highlights the distinctive challenges of resource-constrained, multicultural academic settings [9]. The CPR and Key 2 audits add cost, which could widen gaps between well-resourced and under-resourced institutions. Mitigations include shared audit services, proportionate requirements for small providers, and regional cooperation through verification networks such as the African Qualification Verification Network [37].

Digital credentials and micro-credentials. The Council of the European Union adopted a Recommendation on micro-credentials on 16 June 2022. It supports their development and recognition across institutions and borders, notes that common standards for quality and transparency are needed, and the Commission is exploring how Europass could support implementation [44]. Short AI courses, including those accredited by training-provider accreditors (Section 3.8), fall into this space. A CPR-style record, with its fields for assessment method, observation and AI-use band, would let micro-credentials carry comparable evidence into recognition and employment decisions.

3.12 Implementation roadmap

The phasing below is the author's illustrative proposal. It follows the staged approach AACSB is using [23] and should be adjusted to each jurisdiction (Table 4).

Table 4. Illustrative phased roadmap for introducing HAIE.

Phase	Timing	Actions	Lead actors	Evidence of success
0. Prepare	Months 0-6	Inventory AI functions; assign Autonomy Ladder levels; adopt an AI governance policy aligned with ISO/IEC 42001 [32]; map duties under POPIA [7] and, where applicable, the EU AI Act [6]	Institutions	Register of AI uses; named accountable officers
1. Pilot	Months 6-24	Pilot HAIE in a small group of programmes including dental and medical programmes; prototype the CPR; run Key 1 audits using ISO 21001 and ISO/IEC 42001 [30,32]	Institutions, accreditors, professional councils	CPRs issued to pilot graduates; audit findings
2. Evaluate	Months 24-36	Test propositions P1 to P3; review privacy, cost and equity effects	Researchers, regulators	Published evaluation; revised criteria
3. Scale	From month 36	Councils set Key 2 thresholds; recognition authorities trial reading CPRs; accreditors add criteria; review every two to three years	Councils, recognition authorities, accreditors	Faster recognition decisions; stable licensing outcomes

Priority actions by stakeholder are summarised in Table 5.

Table 5. Priority actions by stakeholder.

Stakeholder	Priority actions
Institutions	Classify AI functions; cap decision functions at Level 2; redesign assessment with observed points [11]; train staff; issue CPRs
Accreditors and quality-assurance bodies	Add AI governance and assessment-security criteria; pilot before mandating [23]; apply ISO/IEC 17011 principles of competence and impartiality to audit bodies [29]
Recognition authorities (for example SAQA)	Judge programmes on governance, assessment integrity and outcomes, not delivery mode; accept verifiable digital records [19,20]
Professional councils	Define AI-use competencies; set minimum observed assessment for essential competencies; clarify practitioner responsibility for AI-assisted decisions [43]
Regulators and policymakers	Align data protection, AI and education rules; give guidance on automated decisions in education [6,7]
Students and graduates	Disclose AI use honestly; build verifiable evidence of unaided competence [40,41]
Researchers and publishers	Test the HAIE propositions; apply COPE and ICMJE disclosure norms to dissertations [40,41]

3.13 Research agenda

- Controlled studies of guardrailed and unrestricted AI in higher and professional education, extending evidence beyond secondary school [38].
- Comparative study of how recognition authorities and licensing councils treat AI-mediated programmes across jurisdictions [8,20].
- Design and privacy testing of the CPR under POPIA and the EU AI Act [6,7].
- Validity studies of whether observed assessment predicts early professional performance better than unobserved coursework (proposition P2).
- Cost and equity analysis of Key 1 and Key 2 audits for small and under-resourced institutions [9].
- Legal analysis of how liability is allocated among institution, vendor and assessor when AI contributes to assessment or admissions decisions, building on gaps identified in current liability law [43].
- Independent verification of accreditor claims about AI training providers, including AAA's recognition and criteria (Section 3.8).

3.14 Emerging evidence and policy developments

Four recent developments sharpen the case for change and test the framework in Section 3.10.

Student use is near universal. The Higher Education Policy Institute (HEPI) Student Generative AI Survey 2025, which polled 1,041 full-time UK undergraduates in December 2024, found that 92% used some AI tool, up from 66% a year earlier, and 88% used generative AI for assessments, up from 53% [45]. Some 76% of respondents thought their institution would detect AI use in assessments [45]. This is student self-report from one national survey, and the belief in detection sits uneasily with evidence that detectors are unreliable [39]. It supports the premise that assessment design, not prohibition, must carry the integrity burden (Level 2 of the Autonomy Ladder and Key 2).

Structured AI tutoring can work, within limits. A randomised crossover trial in an introductory physics course at Harvard (233 students enrolled, 194 eligible) compared a purpose-built AI tutor used at home with in-class active learning. Median post-test scores were 4.5 for the AI group and 3.5 for the in-class group, and the AI group spent a median of 49 minutes on the lesson [46]. The authors caution that the study covered one course at one institution, short-term first-exposure content and a bundle of design features,

so the tutor cannot be separated from its prompts, videos and pacing [46]. The finding fits the view of this review that guardrailed, human-designed AI can support teaching [38,46] and it does not show that an institution can safely be run by AI.

AI literacy is becoming a legal duty in the EU. Article 4 of the EU AI Act requires providers and deployers of AI systems to take measures to support AI literacy among staff and others who operate or use those systems on their behalf; it has applied since 2 February 2025, national authorities enforce it, and the European Commission states that no certificate is required [47]. Universities that deploy AI in admissions, assessment or monitoring are deployers, so staff training and training records are already a compliance matter, and the CPR logic in Section 3.9 extends naturally to staff competence.

Quality-assurance and national policy bodies are responding. The UK Quality Assurance Agency (QAA) has published advice for providers on maintaining quality and standards, reconsidering assessment and supporting academic integrity in the era of generative AI [48]. Its resources are advisory and set no binding AI accreditation criteria [48]. In South Africa, the Department of Communications and Digital Technologies published a Draft National AI Policy on 10 April 2026, with comments due by 10 June 2026; it is not binding law, names education and skills among its focus areas, and proposes a staged, risk-based approach with new oversight bodies, including an AI regulatory authority and an ethics board [49]. This updates the earlier observation that South Africa lacked a dedicated AI framework [43]. The draft does not, in the summary reviewed, set rules for AI in higher education institutions specifically, so the Council on Higher Education, SAQA and the Information Regulator remain the practical regulators for now.

Taken together, these developments show rapid adoption, early positive teaching evidence, and regulation that is moving from principles toward duties. None provides a verified record of how an individual graduate's competence was shown, which is the gap the HAIE model addresses.

3.15 Limitations

This is a narrative review with non-exhaustive searching and no formal quality appraisal. Some sources were available only as abstracts or provisional manuscripts. The legal analysis is descriptive, not legal advice, and the evidence base is dominated by health professions education, the EU and South Africa, so findings may not transfer to other disciplines or jurisdictions. Several accreditor details rely on secondary or commercial sources, and accreditation standards are changing quickly. The American Accreditation Association was assessed from its own website and two Department of Education lists only, and its recognition status elsewhere was not verified. Neither the HAIE model (Section 3.9) nor the framework in Section 3.10 has been empirically tested.

4. Conclusion

AI-managed universities and colleges can fit within existing legal and recognition systems, provided that people remain accountable for decisions and for the integrity of awards. The instruments reviewed converge on four conditions: human accountability for AI tools, protection of students in automated decisions, secure assessment of competence, and institutions whose legitimacy and quality assurance can be verified.

The widest gaps lie where high-stakes decisions and professional licensing meet. Admissions, progression and assessment attract the strictest legal controls, and qualification-recognition instruments do not yet speak directly to AI-mediated delivery. For professional and postgraduate awards, the central task is to show that graduates are competent in their own right, not merely that AI-assisted coursework was completed.

Recent US accreditor actions show momentum but leave a gap: AI appears as a curriculum outcome or governance duty, not as verified evidence of individual competence. The proposed HAIE model addresses this by pairing an AI Autonomy Ladder, which caps AI at an advisory role in decisions that determine access, progression and awards, with a Competence Provenance Record that gives recognition authorities and licensing councils portable evidence of how each competency was demonstrated. If its propositions hold in pilot testing, HAIE could let accreditation, recognition and licensing work from a shared evidence base. ISO standards (ISO 21001, ISO/IEC 42001 and ISO/IEC 17024:2026) offer ready audit foundations, and private accreditors such as the American Accreditation Association already apply ISO-based accreditation to training providers, although their recognition status must be verified before others rely on it.

In practical terms, institutions should classify their AI functions and pilot provenance records; accreditors and recognition authorities should adopt AI-governance and assessment-security criteria; professional councils should define AI-use competencies and minimum observed assessment; and researchers should test the propositions set out in Section 3.13.

Institutions, quality-assurance bodies, recognition authorities and professional councils each have a role in the framework proposed here. The framework needs empirical testing, ideally through comparative studies of graduate competence and of how recognition and licensing bodies treat AI-mediated programmes across jurisdictions.

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