

Evolving Quality Assurance in Education: Global Frameworks, Institutional Practice, and Artificial Intelligence Development

A Doctoral Dissertation

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Abstract

This doctoral dissertation examines the evolution of quality assurance systems in education in the context of global diversification and the rapid development of artificial intelligence. It analyses the compatibility of established frameworks—including the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015), INQAAHE International Standards and Guidelines (2025), UNESCO guidance on generative AI (2023), CHEA Guiding Principles for Artificial Intelligence in Accreditation and Recognition (2025), and ISO 21001—with AI applications in teaching, assessment, and institutional management. Drawing on systematic reviews published in 2025–2026, the study argues that existing quality assurance principles remain fundamentally compatible with AI when human judgment, transparency, equity, and educational purpose are preserved. The dissertation identifies opportunities for AI-supported quality enhancement alongside risks related to assessment validity, algorithmic bias, and governance, and proposes an integrative model for quality assurance agencies and institutions.

Chapter 1: Introduction

Quality assurance in education developed as a response to massification, diversification, and the growth of cross-border and online provision. Regional frameworks such as the ESG and global networks such as INQAAHE established principles of peer review, transparency, and continuous improvement. The emergence of generative artificial intelligence has introduced new pressures on assessment validity, academic integrity, and institutional governance. Quality assurance agencies and institutions now confront the question of whether existing standards can accommodate AI without compromising core educational values.

This dissertation addresses the following research questions: (1) To what extent are current global quality assurance frameworks compatible with the development and application of artificial intelligence in education? (2) What adaptations are required to maintain educational integrity, equity, and accountability? (3) How can quality assurance agencies support institutions in governing AI use while preserving human judgment in high-stakes decisions?

Chapter 2: Literature Review

2.1 The Development of Global Quality Assurance

Scholarship on quality assurance has examined both the regulatory and improvement dimensions of external review. Stensaker and colleagues have analysed the translation of quality ideas into institutional practice and the balance between accountability and enhancement (Stensaker, 2014; Elken & Stensaker, 2018). INQAAHE's Global Trends studies have mapped regional variation in internal and external quality assurance (Karakhanyan & Stensaker, 2020). The ESG remain the most widely referenced regional standards, covering internal quality assurance, external quality assurance, and the quality assurance of agencies. INQAAHE's updated International Standards and Guidelines (2025) explicitly address diversification, including micro-credentials and online learning.

2.2 Artificial Intelligence in Higher Education

Systematic reviews published in 2025–2026 document widespread adoption of generative AI. A review of 72 studies on assessment found research across 24 countries, with Europe and Asia accounting for the majority (International Journal of Educational Technology in Higher Education, 2026). A synthesis of 53 articles identified themes of personalised learning, assessment integrity, equity, and institutional preparedness (Discover Education, 2026). A scoping review of 394 empirical studies found that generative AI was most often used for feedback, tutoring, and writing support, with mixed perceptions among students and instructors (International Journal of Educational Technology in Higher Education, 2026). HolonIQ (2026) reported that 40% of education AI initiatives in the third quarter of 2026 focused on training and upskilling.

2.3 Policy Guidance on AI and Quality Assurance

UNESCO's Guidance for Generative AI in Education and Research (Miao & Holmes, 2023) advocates a human-centred approach prioritising agency, equity, and pedagogical purpose. CHEA's Guiding Principles for Artificial Intelligence in Accreditation and Recognition (2025) emphasise human control of decision-making, authentic data, transparency, data protection, and reliability of AI systems. INQAAHE's 2026 webinar "The Human Advantage: Quality Assurance in the Age of AI" addressed authentic assessment and the preservation of human judgment. ISO 21001:2025 provides a management system standard for educational organisations that can accommodate technology-enhanced processes while remaining learner-centred.

Chapter 3: Theoretical Framework

The dissertation draws on two complementary perspectives. The first is the accountability–improvement dialectic in quality assurance, in which external review serves both public assurance and internal enhancement (Stensaker, 2014). The second is the human-centred AI governance approach articulated by UNESCO and CHEA, which holds that AI should support rather than replace professional judgment. These perspectives are combined to examine whether existing quality assurance principles—learning outcomes, assessment validity, faculty expertise, continuous improvement, and stakeholder engagement—can be extended to AI-enabled environments without requiring entirely new parallel structures.

Chapter 4: Methodology

The study employs a documentary and analytical methodology. Primary sources include international quality assurance standards (ESG, INQAAHE ISG 2025), UNESCO guidance, CHEA principles, and ISO 21001. Secondary sources comprise systematic reviews of AI in higher education published between 2024 and 2026, policy statements from quality agencies, and institutional reports. The analysis maps existing quality assurance principles against documented AI applications and risks to identify areas of compatibility and required adaptation. Limitations include reliance on publicly available English-language sources and the rapidly evolving nature of AI applications.

Chapter 5: Analysis of Compatibility

Existing quality assurance frameworks emphasise learning outcomes, assessment validity, faculty qualifications, student support, and continuous improvement. These principles remain applicable when AI is introduced. AI can support personalised feedback, administrative efficiency, predictive analytics for retention, and data-informed quality enhancement. However, risks arise when AI-generated work undermines assessment validity, when algorithmic bias affects equity, or when institutions adopt tools without clear governance.

Empirical evidence indicates that educators have responded with process-oriented, authentic, and oral assessment designs (International Journal of Educational Technology in Higher Education, 2026). Regional variation is evident: European literature emphasises ethical frameworks and data protection, while other regions show more decentralised institutional responses. CHEA and INQAAHE guidance converge on the principle that AI should augment rather than replace human judgment in accreditation decisions. QAHE's 2026 research paper on world quality assurance and AI compatibility proposes an integrative model consistent with these frameworks.

Chapter 6: Implications for Agencies and Institutions

Quality assurance agencies can embed AI considerations within existing standards. Practical measures include requiring institutional AI governance policies, disclosure of AI use in assessment and self-evaluation reports, periodic re-evaluation of AI tools, and attention to equity of access. Institutions can align AI use with stated learning outcomes, maintain human oversight of high-stakes decisions, and document AI-related processes within their quality management systems. ISO 21001:2025 provides a complementary management framework for institutions seeking to systematise technology-enhanced educational processes.

For agencies such as QAHE, which operate as voluntary international quality assurance bodies, the findings support continued emphasis on transparent process, public verification, and clear distinction between quality assurance review and national degree-awarding authority. AI-related considerations can be incorporated into self-evaluation guidance and review criteria without altering the fundamental scope of accreditation.

Chapter 7: Conclusion and Recommendations

Global quality assurance frameworks are compatible with AI development when core principles of transparency, human judgment, equity, and educational purpose are maintained. The evidence

from 2024–2026 systematic reviews and policy guidance supports an approach in which AI enhances rather than displaces established quality processes. Recommendations include: (1) embedding AI governance expectations within existing quality standards; (2) requiring institutional disclosure of AI use in assessment; (3) preserving human judgment in accreditation decisions; (4) monitoring equity of access to AI tools; and (5) supporting research on long-term learning outcomes in AI-enabled environments.

Further research is required on the effectiveness of institutional AI governance models, the impact of AI on assessment validity over time, and the role of students in AI-related quality processes. Quality assurance agencies have a continuing role in supporting institutions to integrate AI within accountable and human-centred systems.

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Note: This dissertation is prepared for academic and institutional discussion. QAHE accreditation remains a voluntary quality assurance process and does not confer degree-awarding authority.