AI-Enhanced Teaching and Learning Certificate

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Domain: Faculty Development & Capacity Building
Challenge Area: Faculty Capability and Digital Confidence
Status: Established Best Practice (validated and replicable practices)
Implementation Complexity: Low

The AI-Enhanced Teaching and Learning Certificate is a groundbreaking professional development program designed exclusively for faculty members at ADU and LC. This mandatory course aims to empower educators with the knowledge, skills, and innovative tools needed to transform teaching and learning environments by applying Artificial Intelligence (AI). Through a comprehensive curriculum that blends theoretical understanding with practical application, faculty members will embark on a transformative journey to redefine educational excellence. Upon successful completion of this course, participants will be awarded a certificate that signifies their expertise in integrating AI into their teaching practices.

Practical Implementation

At Abu Dhabi University (ADU), the AI-Enhanced Teaching and Learning Certificate was implemented as a structured, institution-wide professional development initiative to systematically embed artificial intelligence into teaching and learning practices. The program was designed as a mandatory certificate for faculty members, ensuring consistent capacity building across colleges rather than isolated or voluntary adoption. It was delivered under the leadership of the Vice Chancellor for AI and Operational Excellence and coordinated through the Center for Faculty Development and Learning Innovation, aligning academic practice with institutional AI strategy and governance.

The certificate was applied through a scaffolded, modular model combining conceptual grounding with hands-on application. Faculty progressed through modules covering AI foundations in education, AI-supported curriculum design, student engagement and independent learning, and AI-enabled assessment and feedback, culminating in a capstone project where participants redesigned one of their own courses using AI tools responsibly and ethically. Delivery was blended to ensure equity and access across campuses, with face-to-face sessions for Abu Dhabi–based faculty and synchronous online participation for other campuses.

Crucially, the program moved beyond awareness-raising to direct classroom impact: faculty were required to apply AI tools within their own courses, reflect on pedagogical effectiveness, and align usage with assessment integrity, data privacy, and institutional policies. This ensured that AI adoption was measured through practice change, not attendance alone. By embedding the certificate into ADU's formal professional development framework, the initiative established a sustainable, repeatable model that integrates AI literacy, pedagogical innovation, and responsible use into everyday teaching practice rather than treating AI as an optional or experimental add-on.

Impact Indicator

The impact of the Certificate at ADU was measured using a multi-layered, evidence-based evaluation approach that focused on practice change, teaching quality, and institutional readiness rather than

Enablers

- Institutional AI strategy and governance framework
- Mandatory, certificate-based faculty development model

participation alone. Measurement was embedded into the design of the program to ensure that outcomes could be tracked systematically and verified. At the faculty level, impact was assessed through required capstone projects, where participants redesigned an existing course using AI-supported strategies aligned with learning outcomes, assessment integrity, and ethical use principles. These capstone submissions were reviewed against predefined criteria focusing on pedagogical alignment, appropriateness of AI use, student engagement strategies, and assessment design. This provided direct evidence of applied competence rather than theoretical understanding.

In addition, pre- and post-program self-assessments were used to measure growth in faculty confidence, AI literacy, and readiness to integrate AI into teaching, assessment, and feedback. Changes between baseline and post-completion responses allowed the institution to quantify shifts in attitudes, skills, and perceived barriers to adoption.

At the teaching and learning level, impact was monitored through reflective practice logs and course review activities embedded in the final module. Faculty documented how AI tools influenced student engagement, independent learning, feedback quality, and assessment efficiency. These reflections were triangulated with peer review feedback and instructional design consultations facilitated through the Center for Faculty Development and Learning Innovation.

At the institutional level, completion of the certificate was linked to professional development records, enabling ADU to track participation across colleges and ensure consistent adoption. Aggregate data from capstone outcomes and faculty feedback informed ongoing refinements to AI governance guidelines, faculty development priorities, and future iterations of the program.

By combining artifact-based evaluation (capstones), self-reported growth, reflective evidence, and institutional tracking, ADU ensured that impact measurement captured meaningful pedagogical change and sustainable integration of AI into teaching and learning, rather than short-term training outcomes.

- Center for Faculty Development and Learning Innovation
- Scaffolded modular curriculum with capstone assessment
- Blended delivery model to support multi-campus participation