The ALMA-DEH Project at the University of Florence: Towards a Sustainable Model for Digital Education

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Riassunto

L'Università di Firenze ha sviluppato, attraverso il progetto ALMA-DEH, un modello istituzionale sostenibile per l'educazione digitale, superando iniziative di digitalizzazione frammentarie per adottare un quadro strutturato per la progettazione e l'erogazione della didattica online. Basato su un modello organizzativo collaborativo, il progetto integra progettazione didattica, produzione multimediale, sviluppo professionale del personale e flussi di lavoro supportati dall'intelligenza artificiale per realizzare corsi online e MOOC scalabili. Processi produttivi standardizzati, un'architettura modulare dei corsi e iniziative partecipative hanno rafforzato l'innovazione didattica e la capacità istituzionale. L'esperienza dimostra come una governance coordinata, competenze professionali e un'integrazione mirata dell'IA possano sostenere la trasformazione di lungo periodo dell'istruzione superiore oltre la durata del finanziamento del progetto.
Parole chiave: Educazione digitale; MOOC; Formazione del personale docente; Intelligenza artificiale; Istruzione superiore

Abstract

The University of Florence has developed a sustainable institutional model for digital education through the ALMA-DEH project, moving beyond isolated digitalisation initiatives towards a structured framework for online teaching and learning. Based on a collaborative organisational model, the project integrates

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instructional design, multimedia production, staff development, and AI-supported workflows to create scalable online courses and MOOCs. Standardised production processes, modular course architecture, and participatory initiatives have strengthened both educational innovation and institutional capacity. The experience demonstrates how coordinated governance, professional expertise, and selective AI integration can support the long-term transformation of higher education beyond project funding.
Keywords: Digital education; MOOCs; Faculty development; Artificial intelligence; Higher education

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Within Mission 4 (Education and Research) of Italy's National Recovery and Resilience Plan, the ALMA-DEH project has enabled the University of Florence to move beyond ad hoc digitalisation and design a structured, replicable process for developing online courses and MOOCs, consolidating a stable institutional model for digital education that supports innovative teaching for students and staff alike.

Coordinated by the Rector's Delegate for Teaching Innovation in collaboration with UNIFI Information Systems Department and the Strategic Projects, Third Mission and Communication Office, the initiative rests on a distributed organisational architecture bringing together disciplinary experts from five scientific areas, research fellows, multimedia technicians, communication staff, and the Digital Learning unit, which – among other things – designed and implemented the Moodle-based Ipazia platform. This reflects a broad vision of multimedia production workflows in which the creation of a MOOC is the result of a collaborative, technically mediated process that requires instructional design expertise and coordinated project management (Luzzi et al., 2025).

Internal capacity building addressed six areas, from online learning methodology and MOOC design to generative AI for content production, video management platforms, filming practice, and Moodle training. This underpinned a workflow in four phases – design and production, integration and setup, review and revision, final testing and validation – supported by a shared repository organised into areas, MOOCs, modules, and didactic units, each governed by standardised templates.

The resulting modular architecture scales consistently: a Mini-MOOC corresponds to one module (six units, one credit), a Midi-MOOC to three modules, and a Large MOOC to six modules, with each unit combining a short video, text, and a quiz. Generative AI tools were embedded across production

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stages – content and quiz drafting, subtitling, language and accessibility revision – yielding, per internal estimates, substantial time savings (Biagini, Pezzati, Spinu & Ranieri, 2025a Biagini, Pezzati, Spinu & Ranieri, 2025b).

By June 2026, UNIFI had produced 36 training products – 15 webinars, 8 Mini-MOOCs, 13 MOOCs – generating 9.891 enrolments overall. Evaluations were consistently positive: webinar satisfaction averaged 4.5/5 across all surveyed dimensions, while Mini-MOOCs and MOOCs achieved overall experience ratings of 8.82 and 9.16 out of 10, respectively, with perceived professional usefulness rated particularly highly (see also Pezzati et al., 2025). Notably, the MOOC on AI literacy attracted particular interest, surpassing 800 enrolments within a few weeks of its release and resulting in approximately 305 open badges awarded, a signal of strong demand for AI-related competences among the university community.

Beyond course production, the project fostered institutional reflection through participatory formats: a workshop with 30 students and doctoral candidates on the university of the future, a collaborative session ("AttivIAMoci") involving about 100 faculty members on AI-supported didactics, and a hackathon on AI literacy with more than 400 participating students. The project has also produced a booklet titled Dialoghi sull'intelligenza artificiale e buone pratiche per l'educazione (Dialogues on Artificial Intelligence and Best Practices for Education) (A.A.V.V., 2026), which brings together theoretical orientations and methodological and operational guidance for the use of AI in teaching.

Overall, the Florence experience shows how a PNRR-funded initiative can move beyond content generation to institutionalise a governance model for digital education – combining organisational clarity, staff training, modular course design, and selective AI integration – positioned to outlast the funding cycle.

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