

# AI-Supported Curriculum Design

## Category: Artificial Intelligence in Education

AI-supported curriculum design uses artificial intelligence to assist the longer-term planning and review of a coherent programme of study. AI may help map outcomes, identify repetition, compare sequences or draft alternatives, while academic teams retain authority over disciplinary purpose, standards and inclusion.

Curriculum design concerns relationships across modules, assessments and progression rather than a single lesson. Generated patterns must therefore be tested against institutional requirements, professional expectations and the knowledge valued by the relevant educational community ([Miao & Cukurova, 2024](#)).

## Curriculum Design Cycle

1. **Frame:** Agree graduate attributes, disciplinary aims, stakeholder needs and non-negotiable standards.
2. **Map:** Represent where knowledge, skills, assessment and learning experiences develop across the programme.
3. **Explore:** Use AI to surface alternatives, gaps, duplication or possible interdisciplinary connections.
4. **Validate:** Review proposals with educators, learners, evidence, regulations and external expertise.
5. **Monitor:** Evaluate attainment, participation and unintended effects after implementation.

## Examples in Practice

A programme team may use AI to compare module outcomes and flag possible gaps in research-methods progression. Staff then inspect the original specifications, consult students and decide whether the apparent gap is real. The curriculum map is a negotiated academic decision, not an automated recommendation.

## Why It Matters

AI can make complex curricular relationships easier to inspect and may broaden the alternatives considered. Nevertheless, curricula embody judgements about worthwhile knowledge and cannot be delegated to a system without lived experience, professional accountability or understanding of institutional context. Curriculum change therefore requires collective deliberation, documented evidence and meaningful stakeholder participation, including learners and relevant professional communities in authentic settings ([OECD, 2023](#)).

## Further Reading

6. Miao, F., & Cukurova, M. (2024). [AI competency framework for teachers](#). UNESCO.
7. OECD. (2023). [OECD Digital Education Outlook 2023](#). OECD Publishing.
8. Mishra, P., Warr, M., & Islam, R. (2023). [TPACK in the age of ChatGPT and generative AI](#). Journal of Digital Learning in Teacher Education, 39, 235–251.

**Related Terms:** Curriculum Alignment | Instructional Design | AI Pedagogy | Constructive Alignment