AI Pedagogy

Category: Artificial Intelligence in Education

AI pedagogy is the principled design of teaching, learning and assessment when AI is either the subject of study or a tool within the learning process. It focuses on the relationship between educational aims, learner activity and technology rather than assuming that the presence of AI will improve learning.

Effective AI pedagogy requires educators to combine subject knowledge, pedagogical judgement and an understanding of AI's capabilities and limitations. The design should preserve purposeful thinking, appropriate challenge, dialogue and opportunities for learners to explain and evaluate their own work (Mishra et al., 2023).

Design Principles

1. **Constructive alignment:** Connect any AI use explicitly to learning outcomes, activities and assessment criteria.
2. **Active cognition:** Use AI to stimulate explanation, comparison and revision rather than to supply finished answers.
3. **Scaffolding:** Adjust guidance and AI access as learners develop knowledge, independence and critical judgement.
4. **Assessment design:** Make valued reasoning visible and clarify permitted, prohibited and acknowledged forms of AI use.
5. **Evaluation and adaptation:** Examine learning evidence and unintended effects, then revise the design accordingly.

Examples in Practice

In a university seminar, students might ask a generative system to produce two contrasting explanations of a theory. They then annotate omissions, compare the accounts with scholarly sources and write a justified synthesis. AI creates material for analysis, while the assessed work remains the student's disciplinary reasoning.

Why It Matters

AI pedagogy shifts attention from what a tool can produce to what a learner must understand and do. This protects against activities that appear efficient but remove the intellectual work needed for learning, while allowing carefully designed AI support to extend feedback and inquiry (Miao & Cukurova, 2024).

Further Reading

6. Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO.
7. Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO.
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(4), 235-251.

Related Terms: Constructive Alignment | Learning Design | Assessment Literacy | Generative AI Literacy