


Letter to the editor

Artificial Intelligence–Enabled Self Determined Learning in Medical Education

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To the Editor

Pedagogy, andragogy, and heutagogy describe a useful continuum of learner autonomy, with heutagogy emphasising self-determined learning in technology-rich environments [1,2]. However, rapid artificial intelligence (AI) integration into medical curricula suggests a distinct paradigm.

Recent AI applications—adaptive platforms, generative tutors, virtual patients—drive personalisation and efficiency but raise bias, transparency and over-reliance concerns [3]. An *AI-gogy* framework helps educators articulate the learner-AI co-agency format, design AI literacy outcomes, and anticipate ethical and assessment implications.

Anchoring *AI-gogy* alongside established paradigms supports deliberate curriculum design, scholarship and governance of AI-mediated medical education. Table 1 compares the paradigms and how AI-gogy fits in as next level.

We propound the term *AI-gogy* to describe AI-enabled self-determined learning where human learners and AI share *co-agency* in goals, pathways and reflection. AI curates adaptive cases, generates tailored assessments and provides formative feedback, while learners critically appraise outputs. This embeds dynamic human-AI partnership at the core of metacognitive learning, an extension of heutagogy [1,3].

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Table 1:

Dimension	Pedagogy	Andragogy	Heutagogy	AI-gogy*
Core principle	Teacher-centred, content-driven instruction & the learner is largely dependent.	Participatory learning where teacher sets the curriculum & objectives and adults learn by their choice of methods.	Learner- driven self-determined learning based on professional challenges, capability, reflection and problem solving. Teacher only guides when needed.	Human-AI co-agency in learning; AI systems dynamically personalise teaching based on student performance. Teacher guides when AI misses.
Rationale	Assumes learners have limited prior knowledge and they require structured guidance, clear objectives and external motivation.	Recognises that adults bring prior experience, prefer autonomy, and practice-linked learning.	Uses learners' internal motivation, adaptability, self-regulation and lifelong learning beyond fixed curricula.	Interactive AI system responds & adapts to student learning. Shared decision-making with intelligent systems.
Typical application in medical education	Large-group lectures on basic sciences or teacher-controlled e-modules with fixed sequences.	Case or problem-based discussions linked to clinical practice where the learning method is chosen by the learner.	Self-determined projects, flexible online pathways where learners have full control over their learning.	Adaptive AI agents that co-construct learning based on a predetermined objective using meta-cognitive reflection.

*AI-gogy shown as a proposed, emergent category extending heutagogy into AI-mediated, co-agentic learning.

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