

Peer Review

Review of: "Metacognition and Pedagogy in the Era of Artificial Intelligence"

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1. Independent researcher

Originality

The paper presents an original and timely argument that situates pedagogy within the challenges of an AI-driven, unpredictable labour market. By foregrounding metacognition as the key to human competitiveness, it moves beyond conventional discussions of digital literacy and content knowledge. The inclusion of AI developments (e.g., DeepSeek) as a contextual driver adds novelty to the discourse.

Contribution to the Field

This work contributes meaningfully to scholarship and practice by proposing a pedagogy centred on metacognitive and socio-emotional skills. Its strength lies in bridging theoretical constructs with actionable strategies, such as self-reflection, collaborative dialogue, and critical questioning, which are highly relevant for teachers seeking practical applications. The discussion also raises important philosophical questions about the role of education in a post-AI society.

Methodology and Evidence

The paper is largely conceptual and philosophical in nature. While it engages with a range of theoretical perspectives, it would be strengthened by incorporating more empirical evidence demonstrating the impact of metacognitive practices in diverse educational contexts. A clearer methodological framing (e.g., conceptual paper, theoretical review) would help position its scholarly contribution.

Clarity and Coherence

The manuscript is well-structured, with a clear flow from the problem statement to the proposed pedagogical framework. The language is accessible while maintaining academic rigour. Some sections, particularly the exploration of AI metacognition, could be clarified further and framed more critically to avoid speculative overreach.

Recommendations for Improvement

1. Integrate empirical studies or case-based evidence to substantiate claims about the effectiveness of metacognitive strategies.
2. Provide a more critical discussion of ethical and cultural challenges in applying metacognitive pedagogy globally.
3. Explicitly state the paper's methodological stance to enhance academic positioning.
4. Refine the section on AI metacognition by situating it within current debates on ethics, cognition, and human-machine interaction.

Overall Evaluation

The paper offers a thought-provoking and forward-looking contribution to educational research. It persuasively argues for a pedagogy that is adaptive, reflective, and human-centred, positioning metacognition as an essential response to the uncertainties of the AI era. With minor revisions to enhance its empirical grounding and critical framing, it would be a valuable addition to the field.

Declarations

Potential competing interests: No potential competing interests to declare.