ALGORITHMIC HEARTBEATS
AFFECTIVE EDUCATION IN THE AGE OF THE FOURTH REVOLUTION

REN International Conference 2026

Designing affective education in hybrid learning environments

By

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The introduction of artificial intelligence into education changes the conditions under which students and teachers construct knowledge, make sense of experience and negotiate trust. The REN International Conference 2026 addresses this transformation through the theme Algorithmic Heartbeats. Affective Education in the Age of the Fourth Revolution, taking affective education as a guiding principle for educational design. Its implications concern the organisation of learning environments, the preparation of professionals and the capacity of institutions to make their technological choices understandable and open to scrutiny. The concept of connected intelligence provides a starting point for understanding cognition within networks (de Kerckhove, 1997). For education, this invites scrutiny of how technological environments organise opportunities for shared meaning-making.

The call draws on Asimov's fictional world to question the boundary between the human and the artificial. In education, this boundary takes shape through everyday decisions: which task to entrust to a system, how to introduce it to students, what information to collect and when to discontinue its use. Every decision embodies a conception of learning and of the person. An assistant that responds immediately may facilitate an activity, yet it may also narrow the space available for uncertainty and for learners to formulate their own questions. Understanding its educational significance requires attention to the entire learning process, beyond the performance achieved.

Hybrid environments therefore call for design approaches that bring embodied experience, social interaction and digital mediation into a coherent educational setting. Multisensory technologies may be investigated for their potential to make spaces more accessible and adaptable; their presence alone does not establish the well-being of those who use them. Individual differences in response, opportunities for choice and the availability of alternatives all require consideration. An environment attentive to emotion provides opportunities for expression and regulation without prescribing a single mode of participation. The relationship between educationally relevant cognitive processes, emotion and bodily experience provides a rationale for examining these environments beyond information delivery (Immordino-Yang & Damasio, 2007).

Particular interpretative care is needed when sensors and computational systems are used to infer affective states. A physiological signal acquires meaning in relation to the context, the

activity and the individual's history; it does not provide transparent access to subjective experience. In educational research and practice, such data must remain open to comparison with observation and with the person's own account. Responsible design also requires explicit purposes, proportionate data collection and clear criteria governing access to information. The technical possibility of measurement does not, in itself, establish its educational relevance. The use of generative artificial intelligence in self-narration likewise requires a clearly defined educational framework. Creating a story, rewriting an episode from another perspective or discussing an automated response can provide opportunities for emotional exploration. Teachers support the movement from a system's suggestion to the learner's own interpretation, helping students distinguish generated content from what they choose to recognise as their own. The activity gains educational depth when it allows disagreement, ambivalence and the choice to withhold intimate experiences. Teacher education is central to this approach. Both the fear of replacement and the expectation that automation will resolve the problems of schooling can constrain professional judgement. Teachers need opportunities to experiment with tools, examine their errors, discuss their implications and assess their effects on classroom relationships. Digital Affective Literacy here includes recognising how an interface directs attention and shapes trust, and translating that awareness into citizenship education. It involves examining algorithmic persuasion and identifying the interests that structure digital experience. Attention to the cognitive, emotional, motivational and experiential dimensions of learning offers a further basis for professional reflection (Peluso Cassese & Lembo, 2023). Within the present discussion, this perspective informs the professional evaluation of AI-mediated activities.

The conference's six thematic areas outline a research agenda connecting the ontology of care with social robotics, narratives of the self with learning environments, and citizenship with educator preparation. Dialogue across these fields can encourage studies that clearly specify intended participants, conditions of use and evaluation criteria. For inclusive educational practices, this means documenting participation and autonomy, investigating whether benefits endure over time and extend to everyday situations. It also means making uncertain outcomes visible and reporting the circumstances in which a device fails to address the needs identified.

The REN International Conference 2026 invites the scientific community to contribute to this shared responsibility for educational design. The quality of educational innovation can be judged by the opportunities it gives people to understand the environments they inhabit, influence the rules that govern them and build meaningful relationships within them. Giving educational direction to algorithmic heartbeats means sustaining this space for participation. Affective education can thereby help guide technological change, making it a matter of research, professional judgement and collective deliberation.

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