Educating for Human Development

A one-page guide to educating for human development, **beyond delivering and retrieving knowledge, towards agency, identity and a flourishing life**: the principles and why they matter, to use as much (or as little) as you choose.

THE PRINCIPLE	THE BIOLOGY BEHIND IT	PROMPTS TO RESPOND TO IN CONTEXT
1 Thinking and learning need a reason to care. Without mattering, learning is less likely to stick or be developmental, however focused the task.	**Salience.** We notice, act on and remember what matters to us: it gives our focus networks something to work on, and arousal strengthens the memory. Salience is what makes hard thinking worth the effort. *Menon & Uddin, 2010; McGaugh, 2004*	? Why does this matter to me? ? How could it matter to my students: personally, socially, culturally? ? Does it challenge them in a way that matters to them?
2 Learning needs safety to happen effectively. Too much threat works against learning, so safe challenge is a condition for thinking. Safety has three forms: biological, psychological and relational.	**Safety protects thinking.** Too much stress weakens reasoning and recall, and threats to belonging use up working memory. Safe relationships help: people calm each other's stress (co-regulation), partly through oxytocin, which counteracts cortisol. *Arnsten, 2009; Vogel & Schwabe, 2016; Immordino-Yang et al., 2019, 2023*	? Physical and sensory safety: beyond sleep and hydration, what unsettles the senses? ? Psychological safety: are mistakes safe, with no shame or punishment, and the emotion on having ideas, not being right? ? Relational safety: do students feel they belong and can rely on me and each other?
3 Thinking and feeling are not separate. Feeling is part of how we think, not an add-on. What we have feeling about is what we think and learn about.	**Feeling is part of thinking.** 'Maths is scary' and 'maths is fun' can be learnt along with the maths. Emotion anchors and guides thinking. People who lose the ability to feel about options, through brain injury, can analyse them but decide badly. *Damasio, 1994; Immordino-Yang & Damasio, 2007*	? What might students be feeling as they meet this? ? Is the feeling about the ideas and the process, or the result, reward or grade? ? How was the feeling focused on the ideas and decisions rather than a fun hook wrapped around "dry" content?
4 Remembering reshapes ideas; it does not replay them. So revisiting is a chance to develop an idea, not only to repeat it.	**Remembering rebuilds.** Each time we recall something, the brain rebuilds it from its parts, coloured by the feelings attached to it then and now, and can update it with new information. So memory is flexible but unreliable. *Moscovitch et al., 2005; Nader et al., 2000; Schiller et al., 2010*	? How will we revisit ideas and concepts so they develop, not repeat? ? Do students build the idea further from what they know, or reproduce the procedure or mark-scheme answer? ? What did students add or change on return?
5 Reflection turns experience into meaning and identity. Task focus alone leaves little time to reflect, so learning is less likely to connect to who students are becoming.	**Focus and reflection.** In teenagers, seeking wider meaning predicted growing focus–reflection links, then identity and life satisfaction. Passing a test shows recall now, and recall can be brittle and fade. Learning connected to what we know, and who we are becoming, is more likely to last. *Gotlieb et al., 2024; Bjork & Bjork, 2011; van Kesteren et al., 2014*	? Do students reflect on and discuss future implications: how could I act in, or see, the world differently? ? Do I model what it feels like to plan, think and reflect on the idea, not just the task or mark scheme? ? What can they now do, and who are they becoming?
6 Other people are often how things come to matter. Relationships supply the reasons to care, and help students come to own their thinking.	**We are a social species.** We learn to care about new things through what and who we already care about (the caring cascade). Developmental relationships, a key active ingredient, have four features. *Li & Julian, 2012; CANDLE & ASU CWCE, 2026; Shackleton-Jones, 2019*	? Relationship: do I know each student, and what they care about? ? Shared activity: do we do worthwhile work together, shaped by their questions? ? Rising complexity: do I raise the challenge as they are ready, with real choices? ? Shifting agency: do I hand over time and control as they are ready?

HOW DOES THIS LOOK IN PRACTICE?

How do you apply these principles in practice? We would love to hear from you. We want to understand how applying the biology of learning and development affects your students and you as a professional.

Tell us which principle you tried, what you did, and what you noticed in your students and in yourself. **Get in touch:** michael@affectivelearninglab.com (subject: EHD in practice). Please share no names or identifying details. **Tutors and school leaders:** get in touch to use these principles in professional study sessions or CPD.

1 This page: the principles, why they matter and prompts you could try.

2 Toolkit and Workbook: more ideas and structure, from the classroom through to curriculum and assessment.

3 Deep dive on theory: the White Paper, for an in-depth look at the theory with full references.