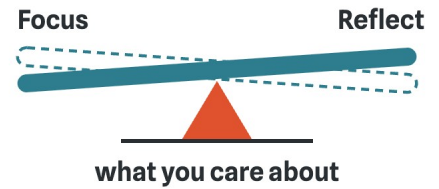


How people learn

Principles for anyone who learns or helps others learn & develop.



Learning (noun): a change in what we can do, or who we are, as a result of memory.

To learn (verb): to keep our reactions to experience, rebuilt when needed and revised when proven wrong.

THE BIOLOGY · *Memory is rebuilt, not just stored.*

1	Learning aids survival and predicts what comes next.	Bodies keep balance (homeostasis) and prepare ahead (allostasis), by updating understanding when prediction is wrong or when something fits what we already know.	●
2	Emotion is part of all thinking, learning and memory.	Without emotional guidance, people can still reason but decide badly: feeling is what makes thinking useful and anchors judgement, not what gets in its way.	●
3	Our biology helps us remember what moves us.	Moments that move us get remembered. Arousal (adrenaline, cortisol) strengthens memory.	●
4	Recalling a memory rebuilds it, so feeling can change it over time.	Memory is rebuilt from the gist, coloured by the emotion attached to it when recalled. Even strong memories can shift, acting as a useful update for what comes next.	●
5	The brain is part of the body, not a separate thinking machine.	Feelings draw heavily on the brain's read of the body (heart rate, hormones), not thoughts about it. A safe stretch helps thinking; overwhelm impairs it.	●

WHAT DRIVES LEARNING · *Meaning is made, not passed on.*

6	We react to what we notice, more strongly when it matters to us.	Surprise and contrast grab attention, and the feeling stays with what was noticed: 'maths is scary' and 'maths is useful' are both picked up. Change one key thing at a time so it lands on the idea.	●
7	Learning tips between focus and reflection, back and forth.	Being on task all the time leaves little room to make sense of things. What matters drives the seesaw tipping.	●
8	New cares build on existing cares, through other people or a challenge.	One care leads to another, mattering personally, socially, culturally or via a challenge to what we know. Our mental picture of the world is built from what & who we react to.	●
9	People are more likely to do hard things if the purpose matters to their life.	Owning the goal, real choice and a real audience help. We can't make anyone remember, but we can make it worth remembering beyond compliance.	●
10	Meaning is a web of associated experiences, not only definitions.	The same words can mean different things to different people and cultures, so we build shared meaning in dialogue and modelling.	●
11	Stories organise information so we can recall it when needed.	Turning information into stories boosts recall significantly, but stories can feel true when wrong.	●

IN PRACTICE · *Learning is not telling and testing.*

12	Hitting a goal and becoming someone are very different things.	A goal can be met with guidance & practice, but how someone acts in the world is what matters, which tests struggle to capture. Cycles of focus & reflection are key.	●
13	Teachers who think about how students develop tend to teach better.	Ask of every task, activity, experience: what is this for, and who is it helping this learner become?	●
14	Let people feel the need first. Enough to stretch not overwhelm them.	Experience creates the need; guidance and modelling answer it, most of all for someone with little to build on, where the gap alone can overwhelm rather than motivate.	●
15	Practice transfers best when it feels close to the real thing.	Basic practice copies a situation safely; effective practice recreates authentic reactions in context, so practice and the real thing trigger the same reaction.	●
16	Expertise is noticing what matters, ignoring what doesn't & judging what to do.	After many experiences in a field, people spot patterns sooner, sense when something is off & judge what the moment calls for, not by merely following rules. But experts can be swayed by framing and get tunnel vision.	●