



Brain Friendly Learning and Development

When developing people in organisations, a vital point to bear in mind is - Learning and Development (L&D) is a cognitive process - not an event, programme, podcast or e-learning package. This mindset should be central to all elements of L&D if we want our learners to adjust, adapt and develop. This paper aims to give ideas and tips to help apply insights from neuroscience to L&D practices.

Neuroscience will not solve all our L&D challenges, and, as a good rule of thumb, it is sensible to be wary of any claims that don't seem to make sense or support established theories or intuitive ideas you may already hold. However, neuroscience can—and does—offer valuable new insights into the learning process and can help us to convince ourselves and others as to why 'best practice' L&D should be adhered to rather than eroded due to other work constraints.

A key brain feature to be aware of is that the part of the brain associated with conscious,

rational decision making -the pre-frontal cortex or PFC - has a very limited capacity in terms of the amount of information it can process. Moreover, the PFC is like a battery and the more it is used the more its 'fuel levels' are depleted. When developing our people, it is very important to recognise this as we will need to work smart and hard to convince our learners brains to give us their attention, and for long enough, for things to 'stick' and for habits to be adjusted. We should also consider we will have our own habits we adhere to in the design and delivery of L&D projects.



Approach Learning & Development as a cognitive process not an event or product

Typically, key L&D delivery challenges include;

1. Getting attention
2. Holding on to it
3. Changing habits

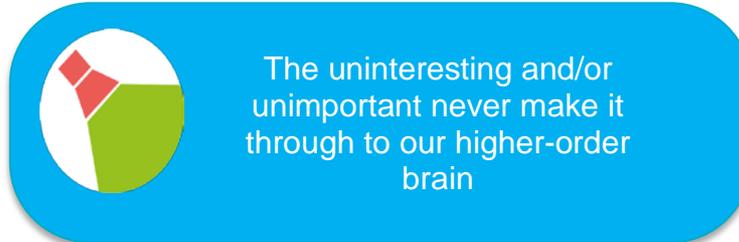
These are increasingly challenging to accomplish but all possible. We can increase our successes by drawing on insights from neuroscience to help structure our design and delivery. We should be considering current organisational culture/climate and previous experiences of training/development. This should affect how we introduce the development project to our learners.





RAD learning: from Judy Willis is a concise and useful model to consider in the L&D world. (**R** = Reticular Activating System (RAS), **A** = Amygdala, and **D** = Dopamine)

and we have turned it into a tick list of things to consider.



The uninteresting and/or unimportant never make it through to our higher-order brain

than dry or boring but in a way that doesn't leave learners overly anxious/stressed. Our learners need to feel safe, supported etc. to be willing to explore and engage with

content, let alone put themselves outside comfort zones. Ensuring a focus on a positive

attainable future can be very beneficial and effective in this regard.

To get people's attention we need to convince the brain's processing gatekeeper/filter (**Reticular Activating System**) that the information we are presenting is interesting and/or important. We can get a 'VIP pass' from the RAS by ensuring our content ticks the following boxes;

- ✓ Fulfils a need
- ✓ Allows conscious/active choice
- ✓ Personal focus
- ✓ Challenge
- ✓ Novelty
- ✓ Variety

Dopamine has a wide range of roles and effects on humans, one of which is its relationship with reward and the expectation of reward. We can also think of dopamine as a 'save' button. It can help the brain identify valuable information/actions that should be retained as they result in us getting something desirable (which may be the avoidance of something we don't want!). We can encourage dopamine through;

- ✓ Social activity
- ✓ Physical activity
- ✓ Achievement /Feedback
- ✓ Helping others
- ✓ Humour

Once we have people's attention, holding on to it for long enough is essential and emotional state (**Amygdala**) and reward (**Dopamine**) can be our friends here.

We need to ensure our learners are in a state of "relaxed alertness". This means making content/experience emotive rather

Re-wiring brains

Our brains are incredibly adaptable if we are willing to engage our attention, thinking and behaviour long enough. The underpinning





mechanism that supports this adaptability is neuroplasticity. This is the brains ability to re-wire itself to support whatever we do regularly and make it easier to do this, over things we have given less focus/practice to. In L&D terms we can increase learning transfer by;

- ✓ Priming (flipped classroom)
- ✓ Doing less, well
- ✓ Staged repetition
- ✓ Deeper processing of info
- ✓ Incorporation (with existing concepts)
- ✓ Application
- ✓ Retrieval Practice (testing)
- ✓ Consequences (either gain or pain)

the delivery/embedding stages (think food/fuel, rest, breaks, variety)

- Disrupt/challenge your own habituated thinking during design/delivery.
- ‘Design-in’ a balance of *construction* of knowledge alongside *consumption* of it for your learners.
- Consider learners processing capacity when designing solutions – where possible aim to do less, well.
- Design sufficient reflection time into the learning process for insight to occur.
- Design reminders, repetition and

To help structure and incorporate these ideas we encourage



Practice makes permanent, so repetition is key to effective learning

clients to consider L&D projects using our ADDE model shown overleaf.

reward into L&D activities

- Use RAD learning to encourage

engagement, retention and application

Key Takeaways

- Think of L&D as a cognitive process as well as a programme or event.
- Pay attention to managing the cognitive ‘fuel tank’ and the emotional state - yours in the design and delivery stages and your learners in

At think change we are experienced and passionate about ensuring the practical applications of neuroscience and psychology in the workplace. If you would like to know more about how we could help you and your organisation, please get in contact.



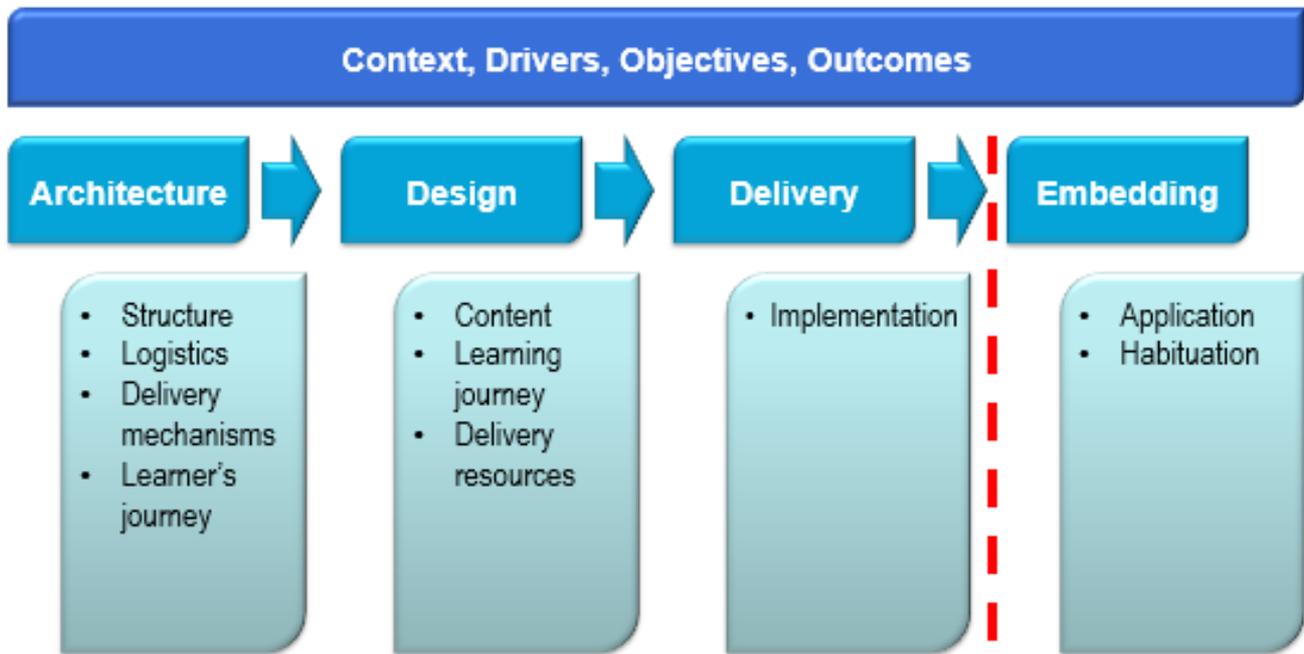


Figure 1 ADDE Model for L&D