

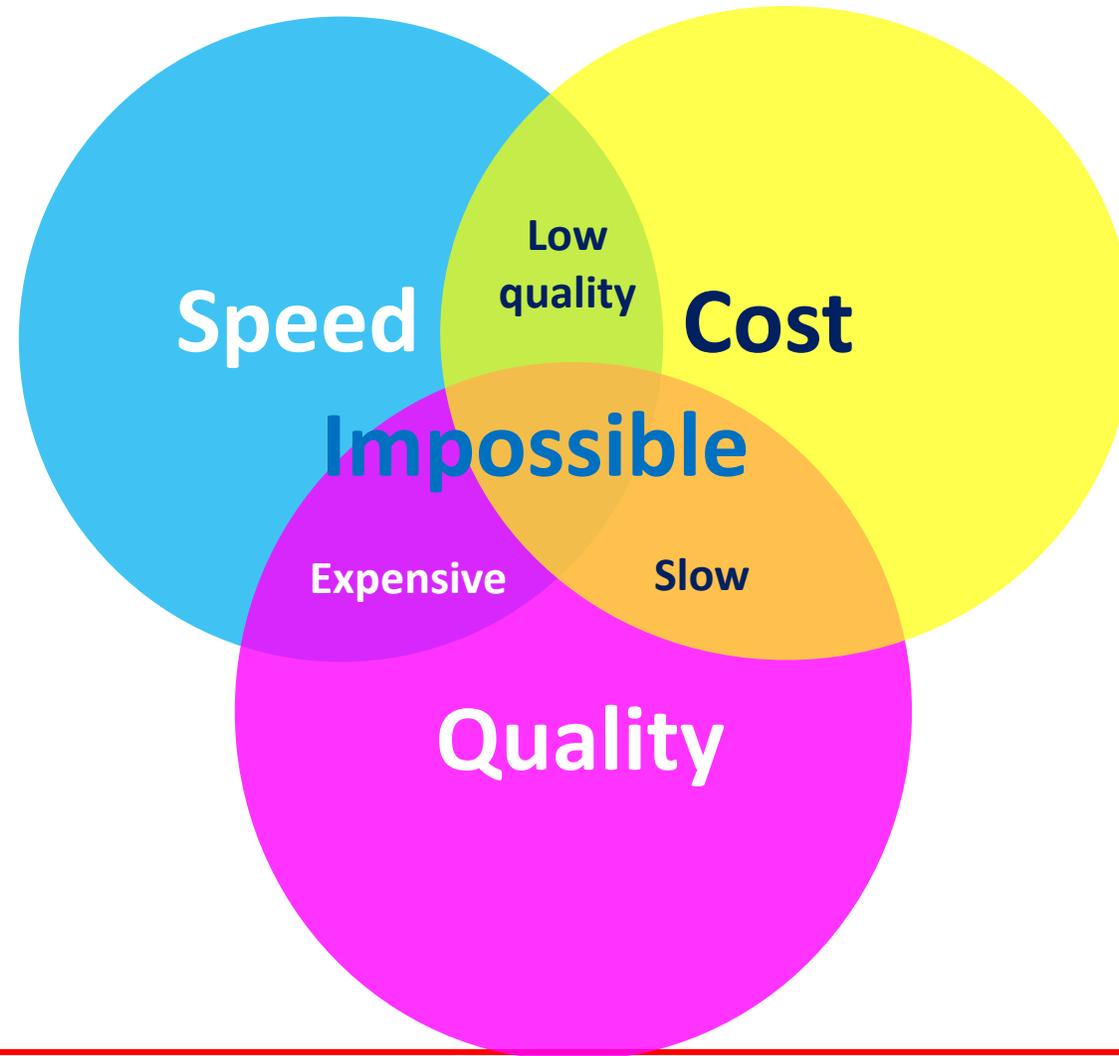
Making Memories Sticky – Writing to the Long -Term Memory

Trevor Dale FRAeS MCIEHF

The ultimate safety tool is, after all, well-trained people.

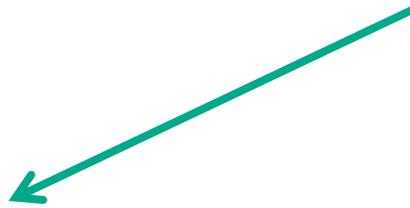


The Need to Deliver More with Less



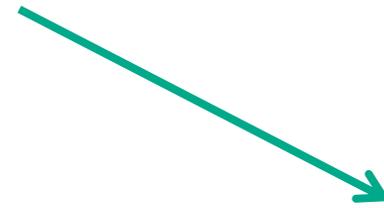
How & why we make errors

Cognition



Automatic

- Fast and effortless
- Subconscious
- Highly practised.



Conscious

- Slow and hard work
- Uses working memory
- Method of last resort.



When mistakes are made ...

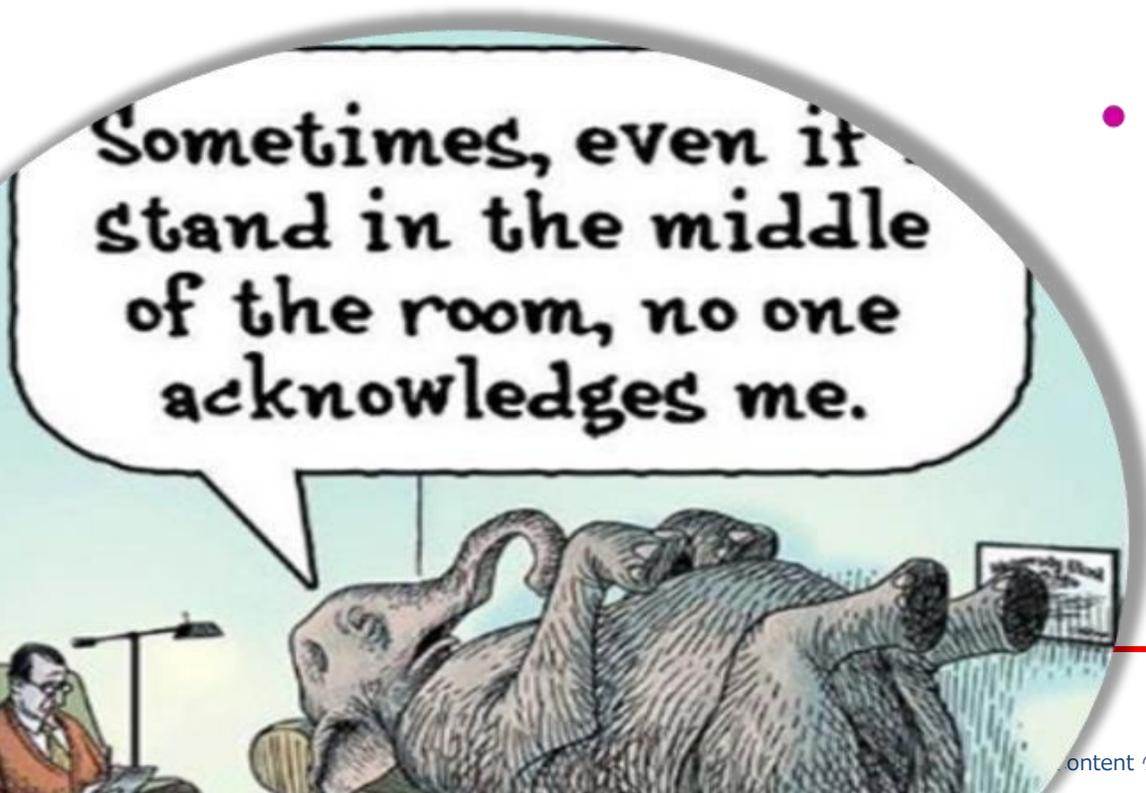
Why did you do that?



“I don’t know I just wasn’t thinking! It just seemed right....”

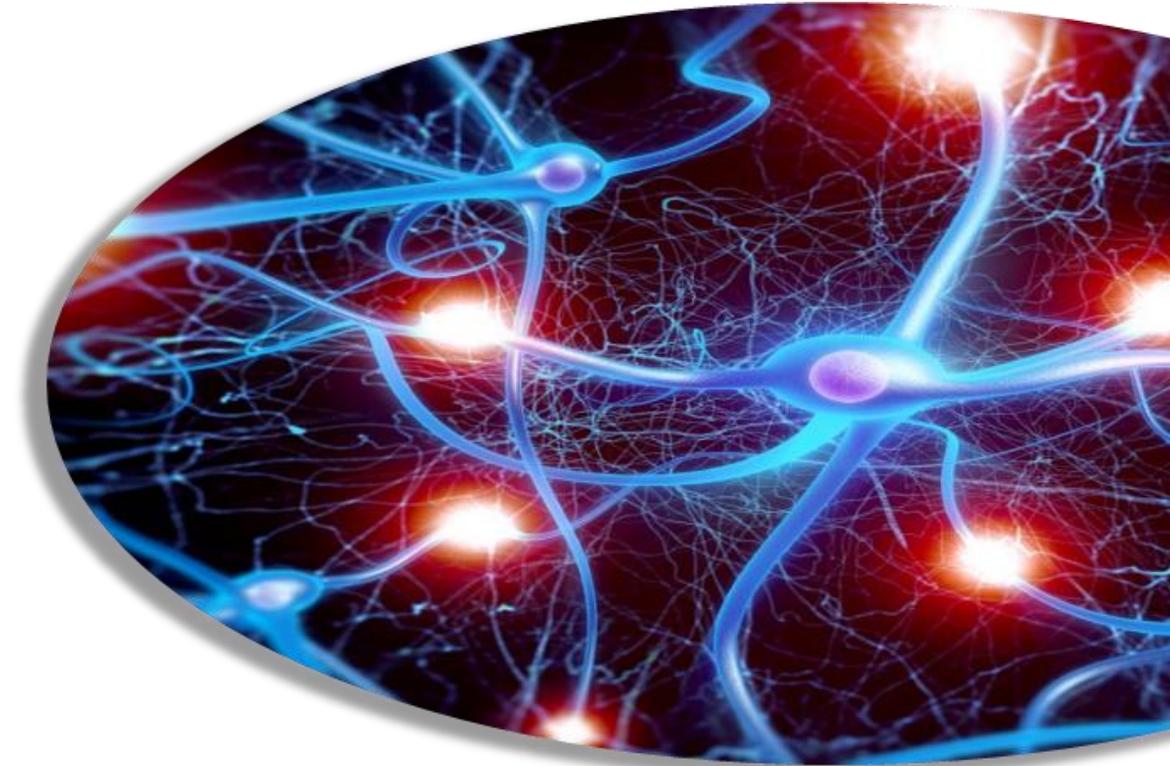
THE CURRENT PARADIGM

- Teaching to the short-term memory
- 79% knowledge degradation in 31 days (*Ebbinghaus*)
- The Magic Number 7
- 18 minute concentration span



LONG TERM MEMORY

- 300,000 times faster
- Retention
- Application



THE NEUROSCIENCE

- Different neurons for short and long term memory
- Different reset rates
- Time sequencing for long-term memory
- Repetitions x3
- Strengthen connections (Synapses)



Time Sequenced Learning

- Embeds knowledge directly into the long-term memory within one learning period
 - Reduces learning times by 75-96%
 - No loss of learning outcome
 - Improved knowledge retention
 - Improved application



BENEFITS

- Reduced learning times/operational impact
- Improved learning outcomes
- Increased trainer coverage, redeployment or reduction in numbers
- Reduced cost/improved ROI



TIME SEQUENCED LEARNING IN ACTION:

Stop & Search

- 5000 officers
- Critical/mandatory training comprising;
 - Two day classroom
 - One hour eLearning

Download™ training;

- One, one hour module
- 10,000 man days saved
- 75% reduction in training budget



TIME SEQUENCED LEARNING IN ACTION: Structural Dynamics Training

- Client; Global IT Company
- The norm
 - Global experts
 - One day course
- Download training;
 - One, one hour module
 - 20% better learning acquisition
 - 7 man hours per learner saved
 - flexible learning



Time-sequenced learning

So how do we design learning to have the right space built in?

Could it look like this?

A complex body of learning in about 10 minutes – space to rest

Review that learning – space to rest

Revise that learning – space to rest.

The Need to Deliver More with Less



Hot off the press: Institute of Physics August 2023

'the big message overall is that one hour's time-sequenced learning pretty much doubles the impact of the traditional teaching.'

Atomic structure theory module compared to 'traditional teaching' GCSE
Physics (16 year old students)

Evaluation conducted by University College London