



Driving Retention

Combining Technology and Science for Training Results

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Why are we here?

“People are generally going about learning in the wrong ways.”

Make It Stick

2014 - Brown, Roediger, McDaniel

Challenges

- What are your biggest challenges with ILT?
- What are your biggest challenges with eLearning?

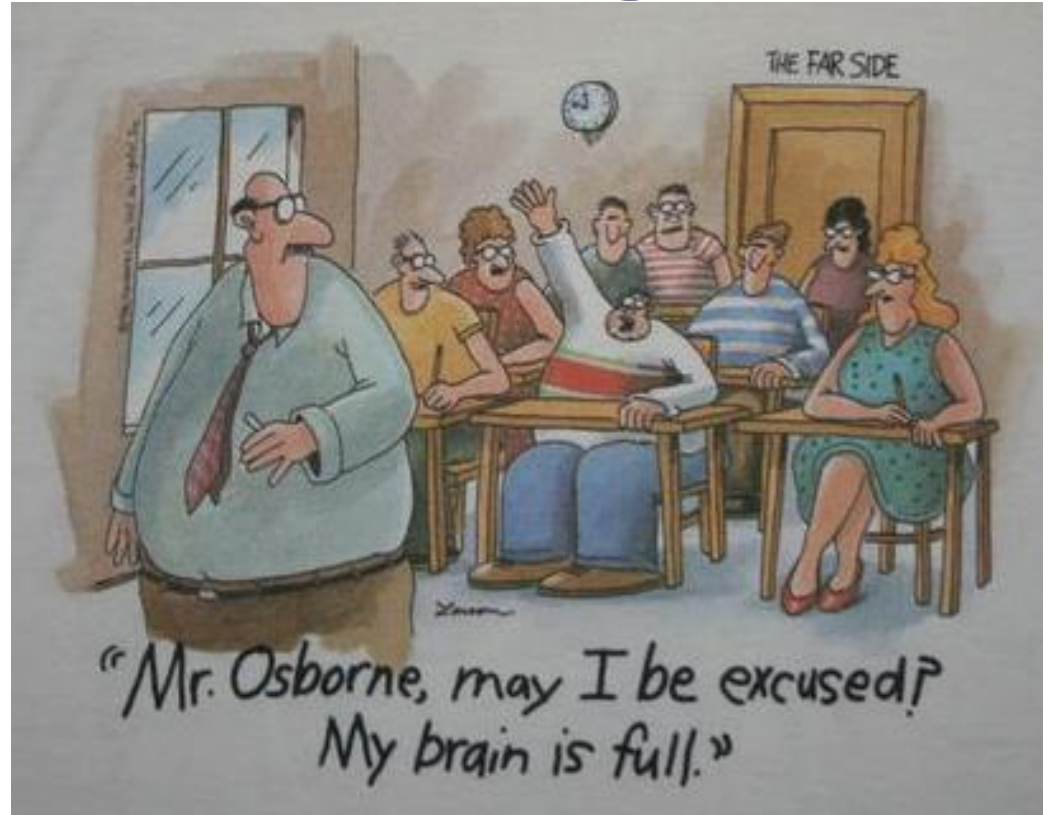


Challenges to Training

- Low “Knowledge Check” interactivity
- Limited hand-on experience
- Dictated Pace
- Time/Scheduling commitments
- Lack of follow-up post event
- Low SME Interactivity*
- “Check the box” perception*

Massed Learning

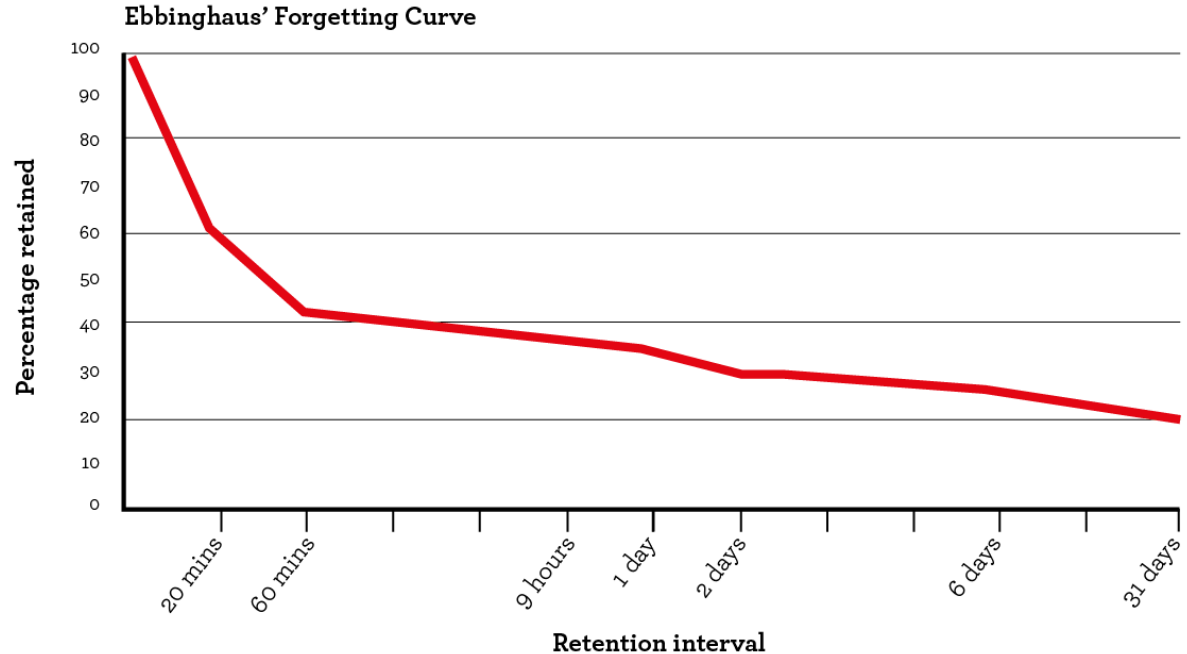
Instructor-Led
E-Learning
≡ Cramming



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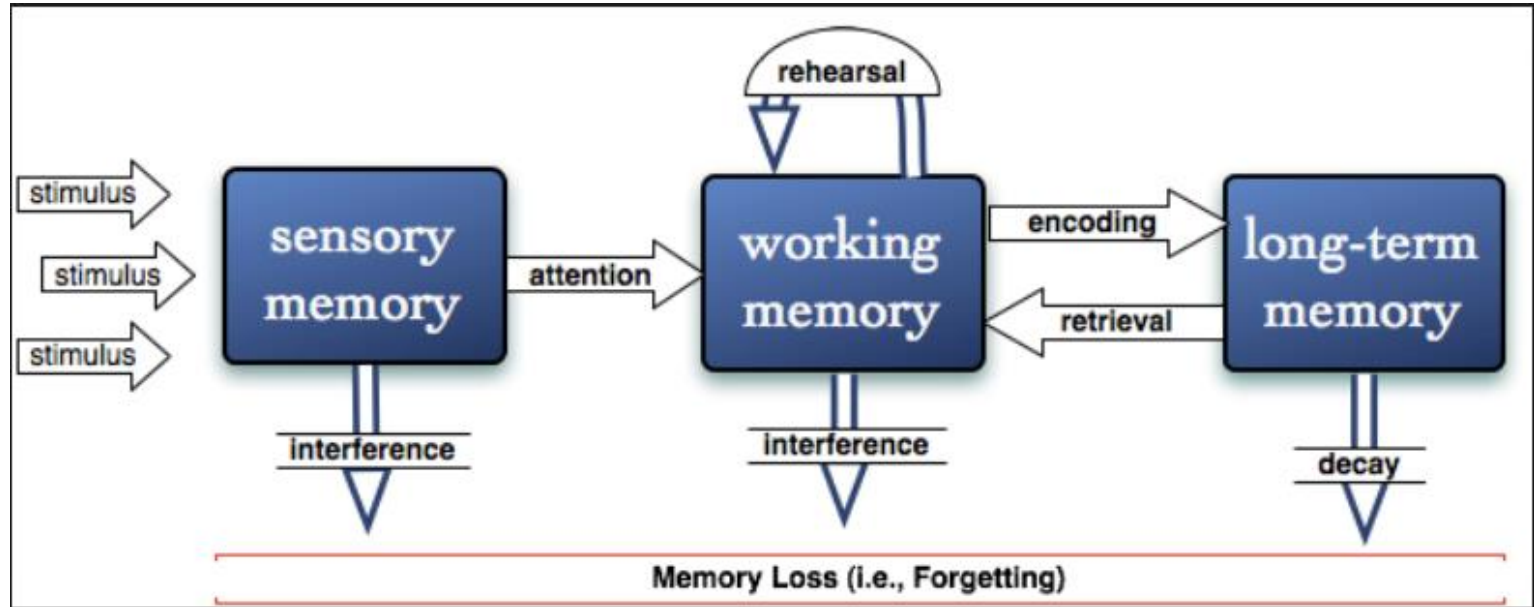
Learning Decay

Recalled content from learning is rapidly lost due to non-use.



<https://fs.blog/2018/12/spacing-effect/>

What does the brain need to support retention?



Gagne's 9 levels of learning

Level 9: Enhancing Performance (Re-transfer)
 Level 8: Informal Peer-to-Peer Learning
 Level 7: Formal Peer-to-Peer Learning
 Level 6: Formal Peer-to-Peer Learning
 Level 5: Formal Peer-to-Peer Learning
 Level 4: Formal Peer-to-Peer Learning
 Level 3: Formal Peer-to-Peer Learning
 Level 2: Formal Peer-to-Peer Learning
 Level 1: Formal Peer-to-Peer Learning

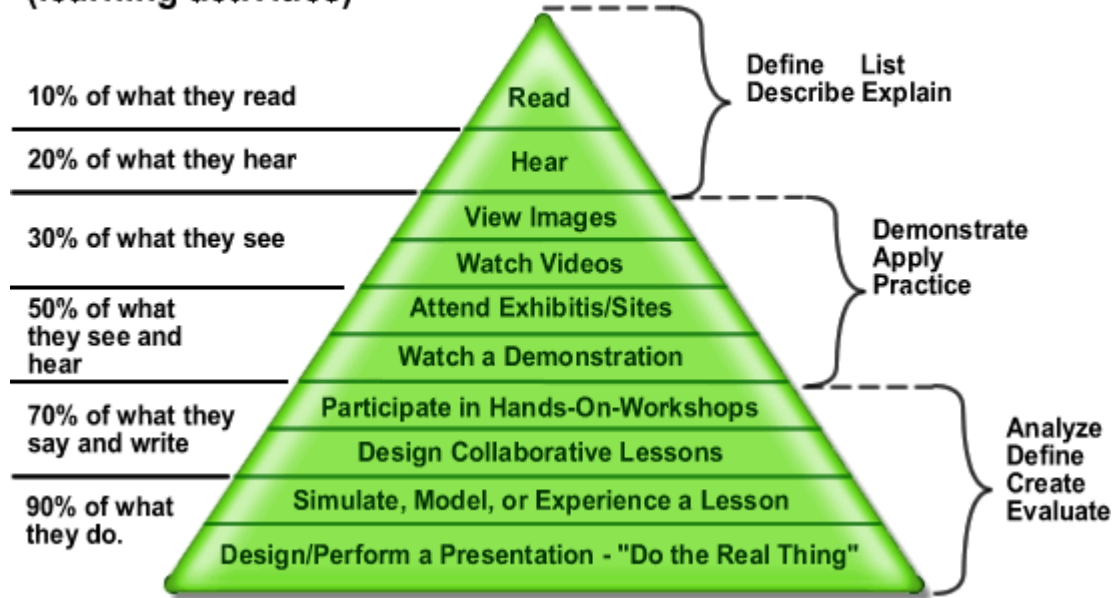
Learning, Information, Skills, Connections, Review, Session, Follow-up, Learning, Information, Skills



Edgar Dale Cone of Learning

People generally
remember...
(learning activities)

People are able to...
(learning outcomes)



Conditions to support transfer

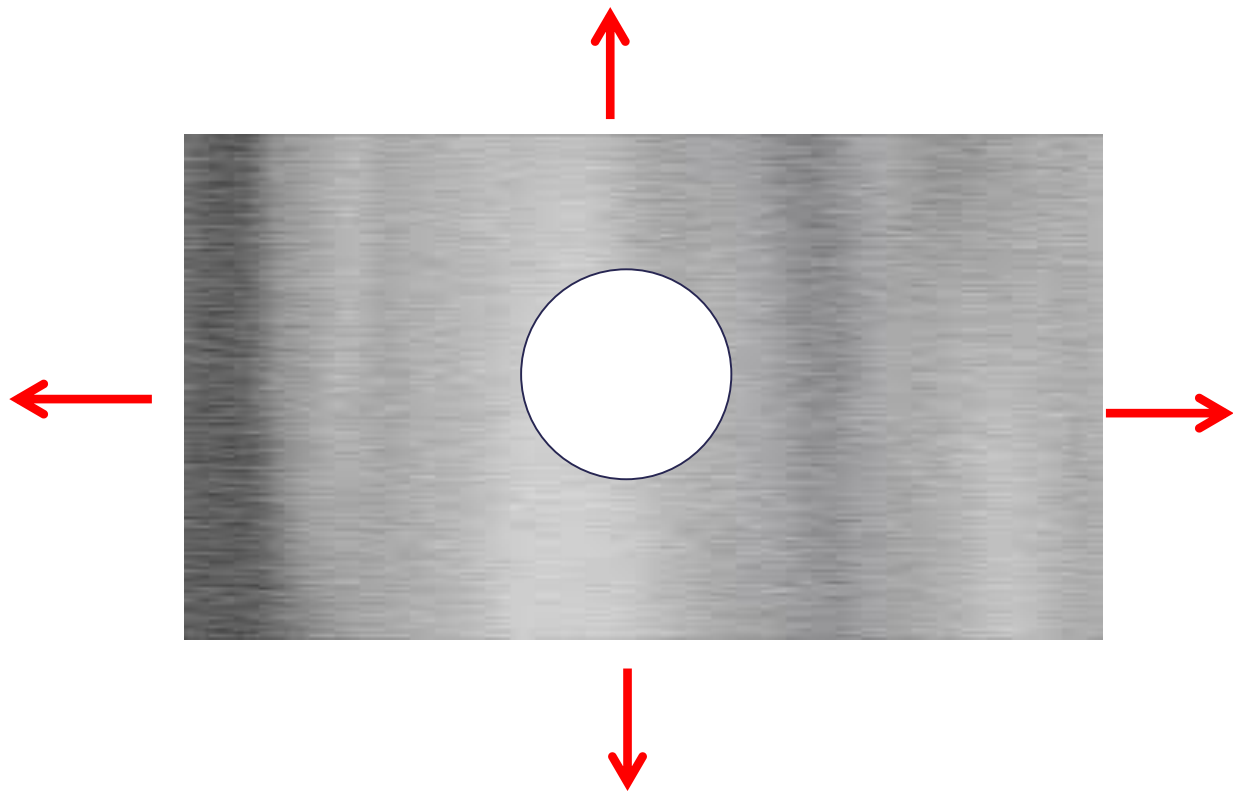
- Diverse Practice
- Abstraction
- Reflection/Self Monitoring
- Mindfulness
- Metaphor & Analogy

Strategies to promote transfer

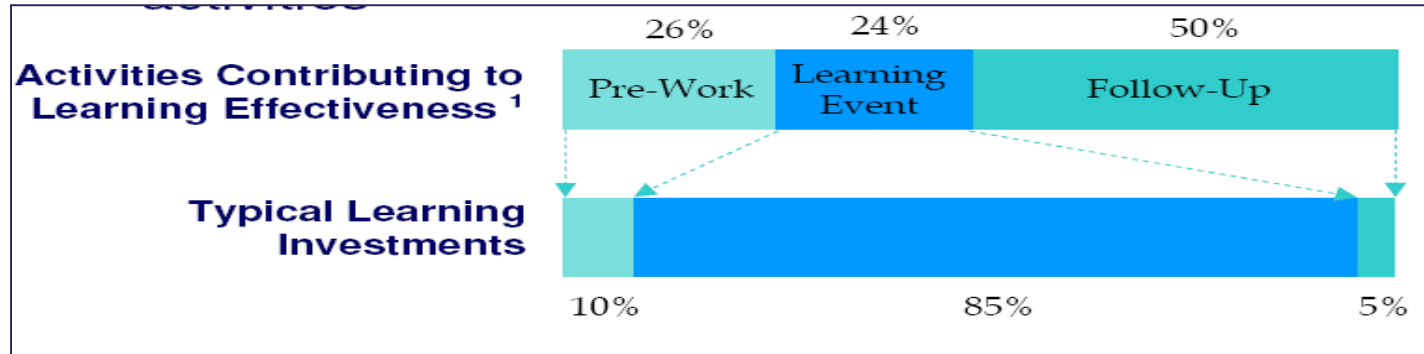
- Teach subject matter in meaningful contexts
- Employ informed instruction
- Teach subject matter in circumstances as similar as possible to those in which it will be employed

Strategies to promote transfer

- Drive for a problem-solution orientation
- Use experience as a foundation
- Encourage positive attitudes
- Range of practice
- Practice after training



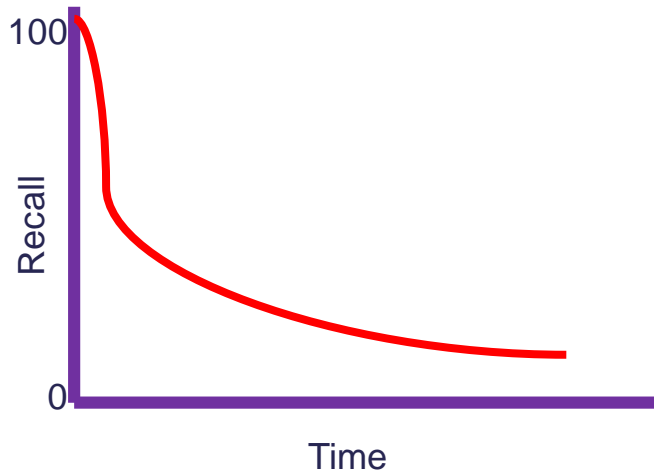
Activities Contributing to Learning



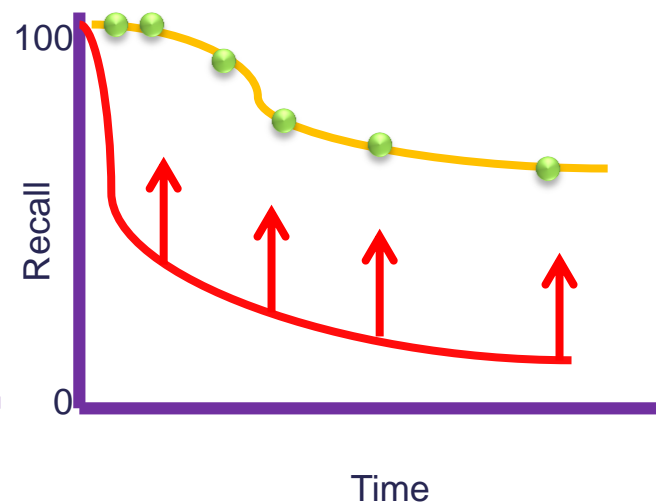
In Training Magazine's survey, 1,200 learners stated that the value from training has three segments

Follow Up to Improve Retention

Recalled content from learning is rapidly lost due to non-use.



Targeted follow up activities drive the forgetting curve up



Build Over Time

- Homework?
- Email
- Threaded Discussion Groups
- Webinars
- Mobile Apps
- Surveys
- Microlearning
- YouTube
- Research Request
- Peer-to-Peer Teaching
- Supervisor and/or Peer Review
- Personal development plan



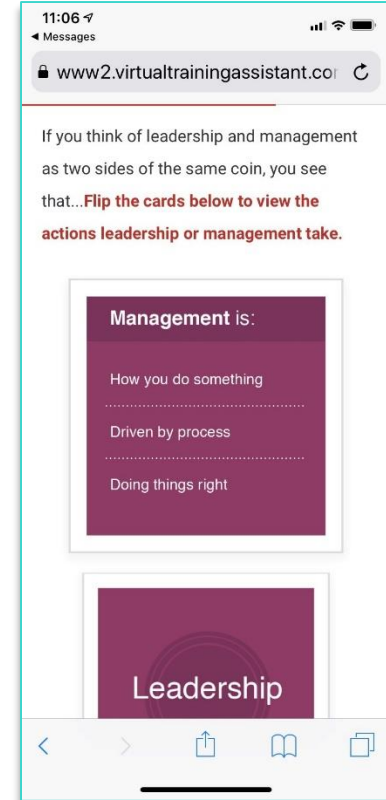
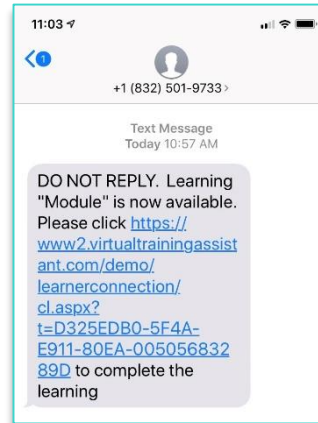
What is Spaced Learning?

- Delivery of small, repetitive learning experiences
- Delivery separated over time
- Reinforce previous learning
- Build new information
- Proven to improve retention



Spaced Learning

- Spaced learning is a form of micro-learning.
- All micro-learning is not spaced learning.



Why aren't we doing it?

- Tracking
- Management
- Development Effort
- Interoperability



How can xAPI help?

- Tracking learning outside the LMS
- Ability to analyze learner behavior
- Adapt learning to the user

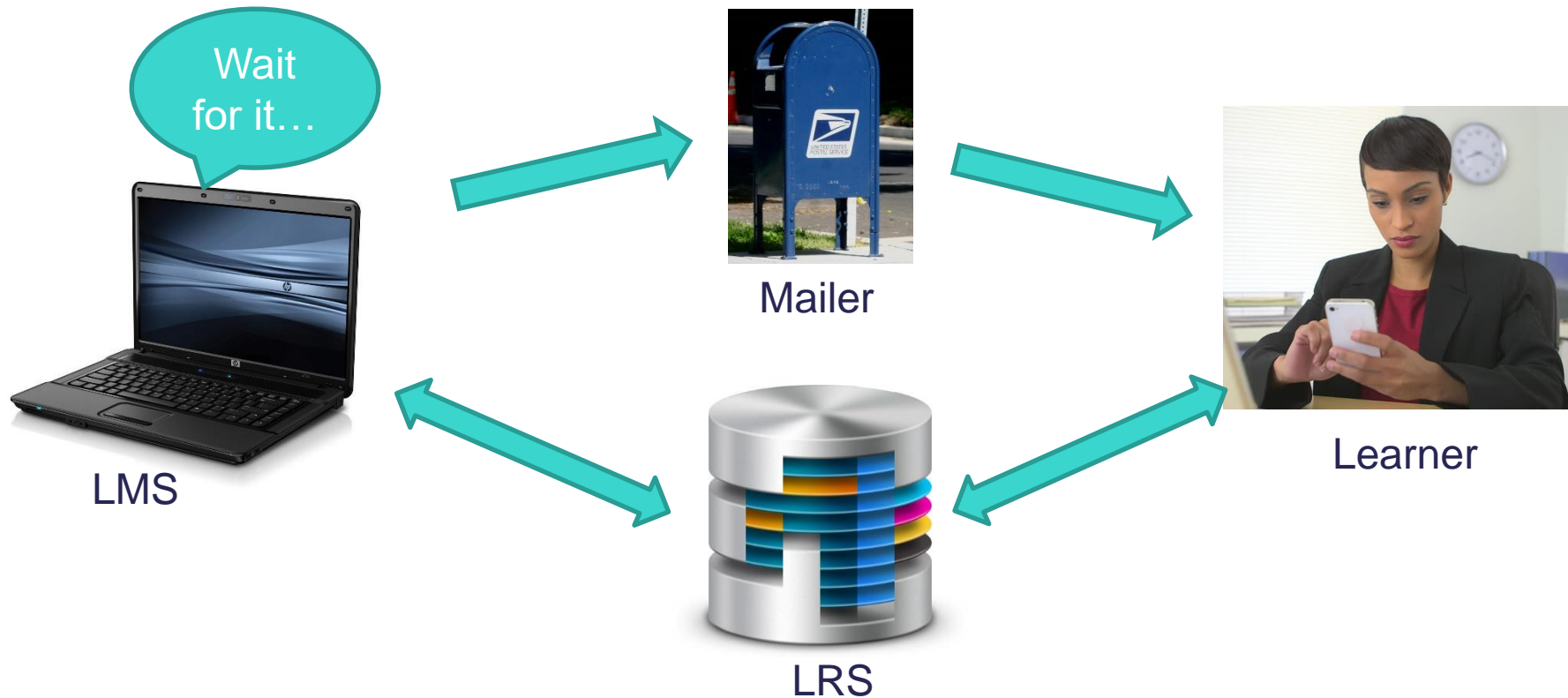


The Process

Credentialing, Delivery & Management

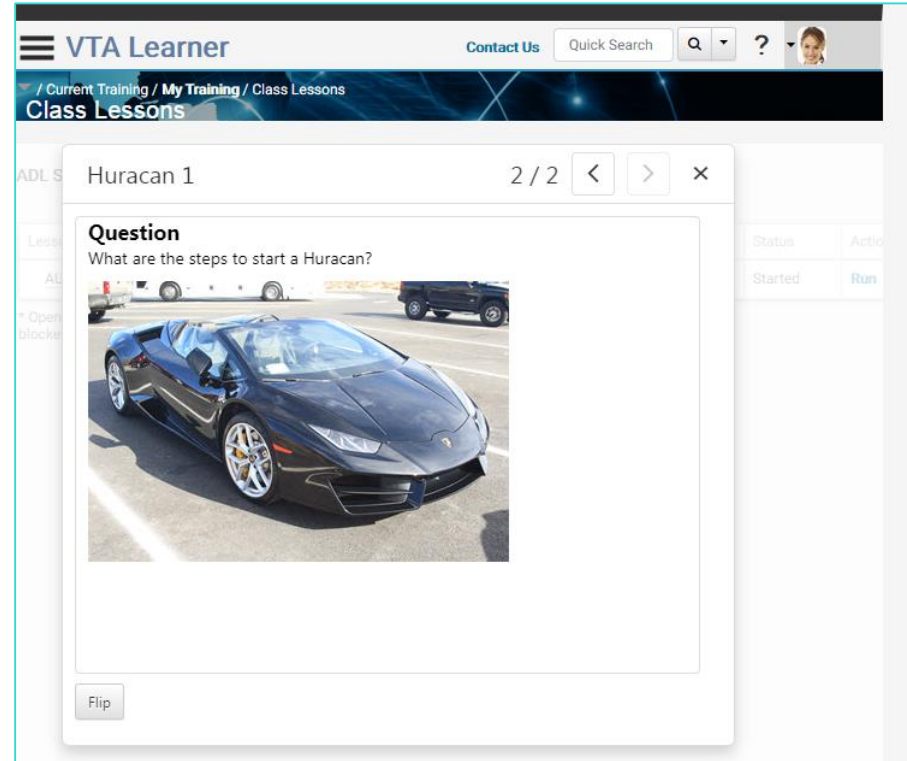
- What is our content? cmi5 or xAPI “package”
- How do we get our actor? embedded token
- How do we schedule frequency? LMS/LXP
- How is learning notification delivered? SMS or email
- How do we follow up? SMS/email/reporting

Delivery

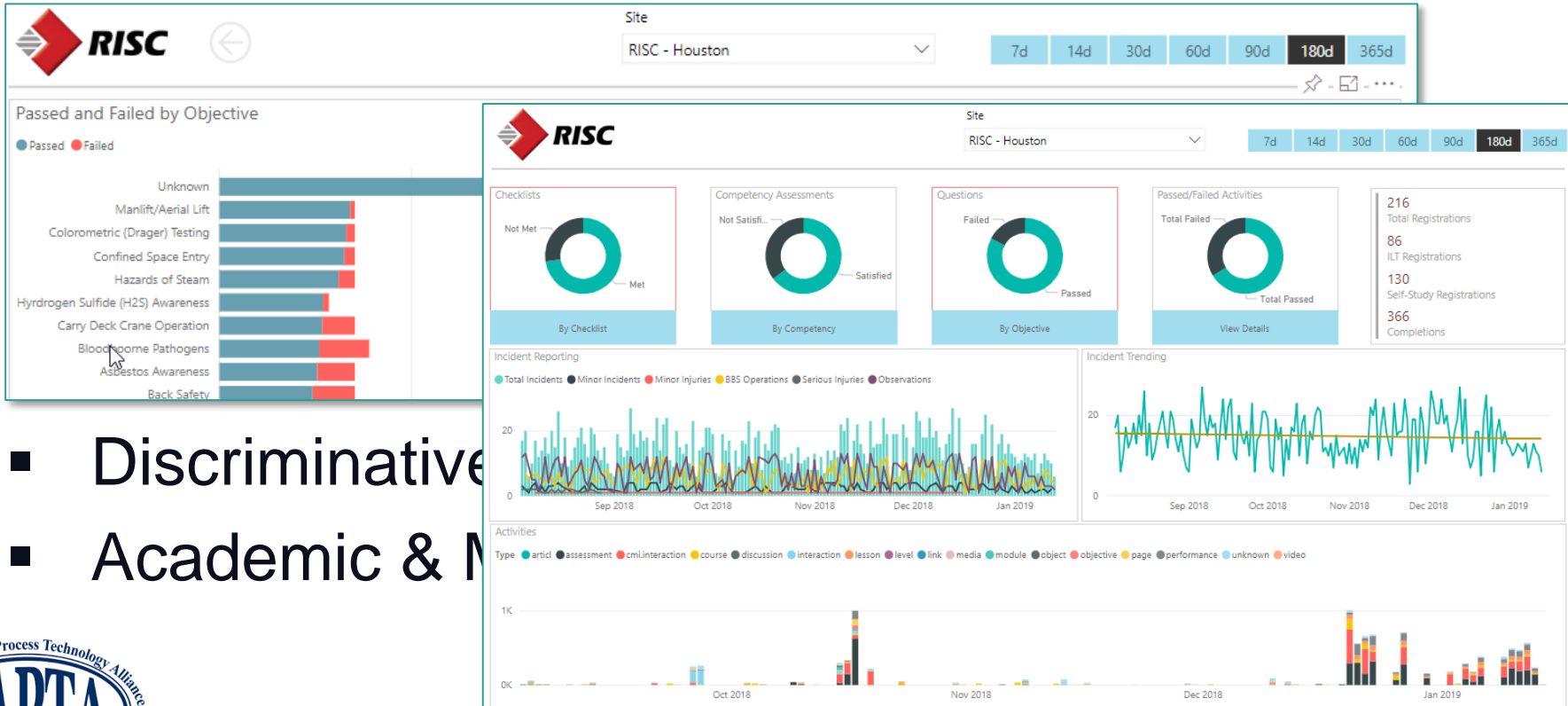


What is Active Recall?

- Stimulate memory
- Testing effect
- Flash Cards
- xAPI Profile



What is Interleaving?



- Discriminative
- Academic & N

Case Study – ILT Interactivity

Challenge – Highly regulated industry with a distributed work force delivering technical training.

- Backlash from web-based training
- Criticism of instructor-led training
- Critical documentation needs
- Inefficient testing processes



Case Study – ILT Interactivity

On class day...

- Pre-work delivered online
- Class time dedicated to analysis
- Use of audience response for interactivity/knowledge check



All data synchronized with LMS to minimize administrative burden and provide reporting.

Case Study – ILT Interactivity

Advantages

- Increased Interaction & Satisfaction
 - 67% retention vs 48% retention after 30 days
 - 87% of learners report material more engaging
 - 73% of learner report that learning was enhanced
 - 67% of learners felt encouraged to be part of the right answer*
- Completion Reporting
- Natural Vehicle for Retakes
- Immediate Feedback & Remediation



* See Statistics & Sources document

Case Study – ILT Interactivity

Question ID		Last Update		Diff	Wt.	Number of Tests	Percent Correct
		By	On				
73	Housekeeping		07/08/03	1	5	99	10.10
	Housekeeping practices are important, and requires facilities to:						
	B. Establish written cleaning schedules.						
	Totals	Selected	Not Selected				
	Count	0	99				
	Percent	0.00	100.00				
	C. Decontaminate all surfaces after contact with any infectious materials.						
	Totals	Selected	Not Selected				
	Count	0	99				
	Percent	0.00	100.00				
	D. All of the above						
	Totals	Selected	Not Selected				
	Count	68	31				
	Percent	68.69	31.31				
	(E.) Both A & C						
	Totals	Selected	Not Selected				
	Count	10	89				
	Percent	10.10	89.90				

Item Analysis – Detail

Item Analysis – Detail

Next Steps?

- Take inventory of your tools.
- Identify opportunities & impact
- Assess culture & infrastructure
- Develop a data strategy & governance
- Evaluate & update



Never forget your learners

References

- <https://www.td.org/insights/spaced-learning-an-approach-to-minimize-the-forgetting-curve>
- <https://harvardmagazine.com/2009/11/spaced-education-boosts-learning>
- <https://risc-inc.com/spaced-learning-cmi5-xapi/>
- <https://learningsolutionsmag.com/articles/using-xapi-to-evaluate-successful-completion-of-elearning>

Thank You!



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