THE SCIENCE BEHIND MICROLEARNING EFFECTIVENESS

BY JD DILLON

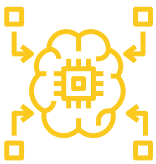
Why can't people remember everything we trained them to do?

Learning is complicated. It's personal, contextual and dynamic. Researchers have spent decades exploring the inner workings of the human brain and they've only scratched the surface. L&D pros don't have to be scientists to help people develop. However, they do have to understand the fundamentals in order to design solutions based on how people really learn.

THE COURSE PROBLEM

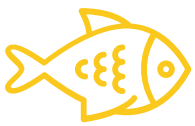
Many L&D teams default to structured courses as the solution for every performance challenge. This presents two problems. First, it is difficult-to-impossible to fit instructor-led or digital courses into the everyday workflow. People simply don't have the time. Second, most courses are not designed using evidence-based principles. They just firehose people with information.

A course-based approach directly conflicts with three fundamental principles of learning science: **memory**, **attention** and **metacognition**.



MEMORY

People can process only a limited amount of information through working memory due to the volume of information and distraction present in everyday life. Regardless of how much information L&D packs into a course, a person can only walk away remembering so much. The right conditions must exist to support the transfer of information from working to long-term memory so that it can be retrieved when needed.



ATTENTION

People also have limited cognitive resources. To save time, people may attempt to multitask through a digital course while also completing work tasks. This just doesn't work. People are proven to make more mistakes or perform more slowly when dividing their attention. Learning requires focused awareness, which means L&D must design solutions with the realities of attention in mind. By the way, people's attention spans are not shrinking and goldfish have no place in learning science.

METACOGNITION

Thinking about thinking is important too. Metacognition refers to people's ability to monitor their own performance and proactively identify areas of need. It also includes their ability to apply the right cognitive strategies to overcome challenges. People need time to think about what they have learned, in which areas they still need to develop and how they can best apply new information on the job.

The fundamentals of learning science may be simple in concept, but they are difficult to apply with a traditional approach to workplace learning. This challenge comes down to two factors: access and mindset.

L&D is forced to shove a lot of information into very limited training periods because they lose access to the employees after onboarding. Whether they work in a contact centre, retail store or financial services office, employees are focused on customers' needs and related job tasks. When they are made available for training just a few times per year, there's only so much L&D can do.

This access problem promotes the course mindset, the idea that people must complete long-form training to learn something new. Most people attended school or training in the past, and they expect workplace learning to look and feel the same. This is why stakeholders will approach L&D and specifically request a course that covers a crazy amount of information but fits into a limited time period. When this mindset is pervasive, learning science goes out the window.

SHIFTING TO AN EVIDENCE-BASED APPROACH

To apply the fundamentals of learning science, L&D must first shift the organisation's mindset. They must open people's eyes to the potential of continuous learning. With mobile technology and artificial intelligence, it is easier than ever to integrate learning opportunities into the flow of work at the speed and scale a business requires. In addition, microlearning can help L&D teams align their support with the way people actually learn in just a few minutes per day. These principles include tactics supported by the work of Dr. Alice Kim at the Rotman Research Institute and are proven to impact knowledge retention and application.

SPACED REPETITION

People remember information better over the long run when learning takes place across multiple distributed sessions rather than one long continuous session. Microlearning allows L&D to break down complex topics and deliver new training and reinforcement activities in brief sessions that fit within the daily workflow.

RETRIEVAL PRACTICE

Actively retrieving information from memory is a more effective method for supporting long-term retention than repeated information delivery or self-study. This is why flash cards worked so well in school. Microlearning gives L&D more options for learning activities, including the use of questions and scenarios to challenge people's ability to apply their knowledge.

CONFIDENCE-BASED ASSESSMENT

People need more than knowledge to make the right decisions in the moment of need. They also must be confident in their knowledge. By making learning part of every day, L&D can support metacognition and help people reflect on their own development.

INTERLEAVING

Professional athletes do not master one part of the game before moving on to the next skill. Instead, they mix practice on related skills together because this better mimics real-world application and is proven to support improved long-term mastery. With adaptive technology, L&D can personalise the daily learning experience to focus on the specific needs of each person.

Learning science is not optional. It's the reality of how people develop their knowledge and skills. Therefore, L&D must evolve its practices to leverage evidence-based principles through modern learning strategies like microlearning and adaptive learning in order to maximise their organisational impact and help people do their best work.

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JD Dillon is one of the most prolific authors and speakers in the global L&D community. For 20 years, he worked in operations and learning roles within highly regarded organisations, including Disney, Kaplan, Brambles and AMC Theatres. JD is now chief learning architect with Axonify and founder of LearnGeek.

FURTHER READING AND RESOURCES

Make learning stick and it will translate into employee performance (Axonify)
https://axonify.com/microlearning-platform/brain-science/

Axonify Brain Science Explained by Dr Kim video (Axonify)
https://resources.axonify.com/brain-science/axonify-brain-science-explained-by-dr-alice-kim