



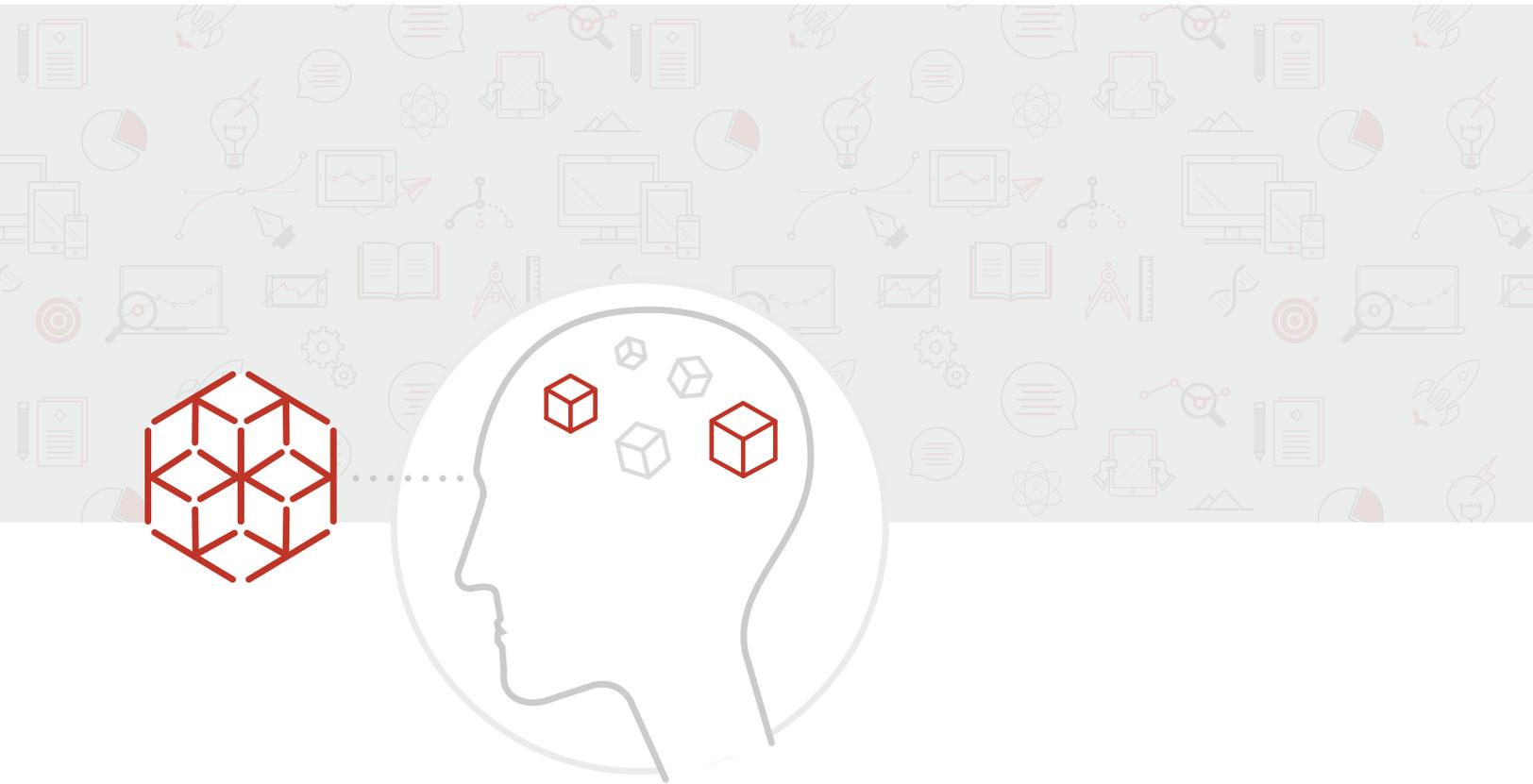
How to Overcome the Illusion of Knowing with a Mobile Training Reinforcement Plan

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How to Overcome the Illusion of Knowing with a Mobile Training Reinforcement Plan

You think you know exactly what your upcoming project will cost and how long it will take to complete. To your surprise, it goes over budget and past the deadline.

You take a course and study rigorously. Since you put in the time, it only makes sense that you'll pass the exam with flying colours. But you don't.

You're confident in your understanding of the specific steps that govern your job. Until you make a grave error that suggests otherwise.

These are *illusions of knowing* – and you've become a culprit.

We are all susceptible to the illusion of knowing – but that doesn't mean we can't do something about it.

When it comes to our corporate learning initiatives and the thousands of dollars we spend trying to make our employees perform better, we can't afford to let the illusion of knowing trample our return on investment.

A mobile reinforcement plan is a learning solution based on retrieval exercises designed to ensure that what your employees learn in class is remembered, understood and applied in real work scenarios. Think of it as the bridge that connects training to doing.



The illusion of knowing is the tendency to mistake the fluency of a topic for genuine comprehension. In other words, you think you understand, when in fact you don't.

The Problem is No Illusion

We all want our employees to be equipped with the skills and knowledge they need to perform well. So we spend thousands of dollars on training programs that offer pertinent information, provide job-specific knowledge and teach new skills.

But how can we be sure that our employees have the ability and the motivation to transfer what they've learned in the classroom to what they do in the workplace?

Truth is, we can't.

An alarming number of training courses fall short of our goals.

Why?

It starts with our training methods – methods that often lead employees down a path where they mistake familiarity for understanding. They're left with an illusion of knowing...a false notion that they've mastered the new content.

And this is only half the problem!

When you compound this illusion of mastery with the fact that employees will forget 70% of what they've learned within 24

hours [see [this article](#) for more on overcoming the Forgetting Curve], you're faced with an uphill battle to make sure your training programs work, and more importantly, that they are able to deliver lasting knowledge and performance.

Now, back to your training methods. If they fall short, you add yet another negative factor into the mix, further worsening employee learning. But even if your training methods are top notch, you're *still* left with the illusion of knowing. There's no way around it.

So while we can't avoid the illusion of knowing entirely, what we *can* do is address it. And a mobile reinforcement plan is designed to do just that.

What is the Illusion of Knowing?

The illusion of knowing is the tendency to mistake the fluency of a topic for genuine comprehension. In other words, you think you understand, when in fact you don't.

For example, an employee takes a crash course in new safety procedures and does extremely well during training. But just five months later, he makes a major mistake when he responds to a particular incident, putting others at risk as a result. Luckily no one is hurt.

Why did this happen?

Research shows that if we can easily or "fluently" recall an image or statement to mind, we are more inclined to believe that we have mastered it.¹ And unfortunately, this means we then refrain from making the required cognitive effort to fully comprehend the concept.

¹ This paper summarizes key findings in the field of cognitive psychology with regards addressing the illusion of knowing. For a comprehensive overview, you may wish to refer to:
Daniel Druckman and Robert A. Bjork, *Learning, Remembering, Believing: Enhancing Human Performance* (National Research Council, 1994).
Peter C. Brown, Henry L. Roedinger III, and Mark A. McDaniel, *Make It Stick: The Science of Successful Learning* (Cambridge, MA: Harvard University Press, 2014).

Take a moment to think about *how* you study. If you're like most people, you "cram" and spend hours upon hours re-reading materials to make sure the subject matter is ingrained in your memory. Contrary to what you might think, this leads to an unwitting self-deception, as your increasing familiarity with the text comes to falsely resemble mastery of the content.

We mistake *fluency* for *learning*.

The employee in the example above did well during training and probably thought he had mastered the new procedures presented to him. What he didn't realize is that he had fallen into the illusion trap – he was unable to apply what he thought he had learned when it mattered most.

Illusions of Knowing Are Made Worse by Two Factors

- 1 Technology makes complex information readily available and easy to visualize, but this only exacerbates the issue. Our immediate access to information results in a deceptive familiarity that we confuse for real understanding.²
- 2 People can be very poor judges of their own level of competence. They struggle to know when learning is most effective and are actually more likely to overestimate their abilities.³ As a result, it is very easy for learners to operate under an illusion of knowing.

² Jennifer L. Chiu, Jennifer Chen, Marcia C. Linn, *Overcoming Deceptive Clarity by Encouraging Metacognition in the Web-Based Inquiry Science Environment. Chapter 33 in International Handbook of Metacognition and Learning Technologies* (New York, NY: Springer, 2013).

³ You may want to refer to: David Dunning, *Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments* (Journal of Personality and Social Psychology, 1999).

Has the Illusion of Knowing Seeped Its Way Into Your Training Programs?

You may be quick to answer with a resounding “No!”

But are you sure?

Though you’re probably thinking that *your* training program is immune to the illusion of knowing phenomenon because employees are frequently tested to make sure they’ve mastered the content before they step foot in their job ...

There’s a catch.

Common training methods often make the illusion of knowing worse. The typical strategies we use to accelerate “learning” during training (for example, massing practice to minimize time spent away from work, providing very frequent feedback, and keeping the conditions of practice constant) are some of the poorest proven methods for long-term learning. The rapid gains produced by a massed practice are often evident, but the rapid forgetting that follows is not. Employees fall prey to the false assumption that they fully comprehend new concepts and are able to apply them in real world situations. The truth is they don’t and they can’t – and it usually takes an unfortunate incident to reveal such shortcomings.

By focusing on immediate results in our programs, we create less than optimal training conditions for long-term knowledge retention and hinder our employees’ ability to transfer skills *taught* to skills *practiced*.

How to Make Sure Learning is Durable

Durable learning is learning that sticks. It's learning that becomes transferrable to the workplace.

There are two components that make this possible:

1) you remember what you learned, and 2) you have the ability to apply what you remember.



Research suggests that effort is the key to deep, comprehensive, durable learning and the ability to transform knowledge into real life actions.⁴ The more effortful and challenging the learning process, the better we internalize new knowledge and the easier it is for us to recall and use that knowledge outside of the training context. On the other hand, the easier the learning process, the more susceptible we are to illusions of knowing.

Rather than focusing on rapid gains over a short period of time, truly effective learning is the result of a slower and more painstaking process that focuses on knowledge retention for the long-term. This can only happen *after* the initial course has ended.

⁴ See footnote "1" for references.

Why You Need a Training Reinforcement Plan

A training reinforcement plan follows a structured training program. It is fundamentally different from in-class, educational experiences in a number of ways.

A good reinforcement plan is:

- 1 Self-paced and driven by the learner.
- 2 Offered immediately after the initial training program and lasts at least 3 weeks.
- 3 Designed to prompt the learner to recall and retrieve what they were taught in class, fostering long-term information retention and understanding.
- 4 Dependent on active effort and motivation on the part of the learner.
- 5 Comprised of short retrieval practices, mainly quizzes, but these may also come in the form of flashcards, smart tips and micro learning modules.

Simply put, you need a training reinforcement plan to maximize the return on investment for the creation and delivery of training programs to which you already allocate a significant amount of capital.

What good is an exceptional course if the material creates false illusions and fails to improve the participants' job performance? A training reinforcement plan is the best way to address the illusion of knowing and to support durable learning. Better yet, *mobile* training reinforcement strategies make the learning plan accessible, convenient and comfortable for the user – and this means higher engagement, long lasting learning and improved job performance. [See [our article](#) on how the mobile revolution overcomes the forgetting curve]

How to Get the Most out of Training Reinforcement

An effective training reinforcement plan introduces carefully planned difficulties for the learner by using retrieval practices that are spaced out, varied, interleaved and inclusive of intermittent feedback. At first, this slows the learning process. But in the big picture, this approach has been shown to cement long-term memory retention and enhance employees' ability to transfer knowledge to the workplace.⁵

Here are four vital characteristics every reinforcement plan should have in order to guarantee that training programs meet their goals.

Effortful

In circumstances where more cognitive effort is required for retrieval, learning is stronger and lasts longer. Learners who have taken part in retrieval practices have a twofold advantage over those who have not:

- 1 A more accurate sense of what they know and don't know (in other words, no more illusion of knowing).
- 2 A strengthened form of learning that accrues directly from retrieval practice.

Every time we call up a memory, we are reinforcing (pun intended) a mental route in our mind, and therefore, deepening our learning and increasing our ability to connect to what we *know* and what we *can do*. Even a single retrieval practice can produce significant improvements in retention.

Spaced Out

To be most effective, retrieval must be repeated again and again, in spaced-out sessions so that the recall, rather than a

⁵ See footnote "1" for references.

mindless recitation, requires some cognitive effort. Spacing between practices allows the brain time to breathe and assimilate learning. So what is the ideal amount of time between practices? Enough so that a little forgetting sets in.

Interleaved and Varied

Interleaving the practice of two or more subjects or skills at random is a more potent alternative to massed practice (the persistent accelerated repetition of something you're trying to engrain in your memory) because it forces the brain to create adaptive mental models that it can rely on later in real work conditions. Compared to massed practice, interleaved and varied learning practices help us better assess context, discriminate between problems, select the right answer and apply the correct solution from a range of possibilities.

Inclusive of Delayed Feedback

Studies show that feedback strengthens retention. So instead of simply testing, an exceptional reinforcement plan both tests and provides feedback for wrong answers. And taking it a step further still, briefly delayed feedback (i.e. minutes or hours after the test) produces better long-term learning than immediate feedback.

A note of caution: employees are likely to be displeased if the method is not transparent to them. Even though mastery and long-term retention are much better if practices are interleaved, varied and spaced out rather than massed, these benefits come at a price. Effective learning requires more effort, and will feel slower and more demanding.

The Takeaway

If your training programs aren't meeting your ROI expectations ...

If your employees suffer from the illusion of knowing ...

If misconceptions and poor information retention are having serious consequences on your business ...

Something is wrong.

You're dealing with the consequences of illusions of knowing.

A mobile reinforcement plan can tackle these problems head on.

We live in a time where our smartphones are a part of our wardrobe – we don't leave home without them.

If we want our employees to put in more effort, to stay committed to the learning process and to retain what we teach them, then we need to make the reinforcement plan:

Effortful

Short practice sessions, simple methods, straightforward use.

Personalized

Specifically tailored to the individual, supportive of learning styles, time commitments, motivation levels and preferences.

Accessible

Downloaded directly onto any mobile device, available anytime anywhere, built in with reminders, prompts and notifications.

Today's imminent availability of mobile technology, cloud computing and artificial intelligence paves the road to what just may be the most effective way to implement and execute powerful reinforcement plans that really make a difference.

So, what's next?

Acknowledge the issue.

Develop the solution.

Implement an effective mobile training reinforcement plan to make a meaningful change in your employees' learning and your business's performance.

MORE ABOUT SWISSVBS:

As a leader in training reinforcement solutions, we empower you with our award-winning ECHO app to improve your employees' retention and performance. Our dynamic platform and training reinforcement experts will maximize your learning investments and equip you with powerful data to transform your learning initiatives.

For over 16 years, our customers have relied on our innovative products and services to improve employee performance and business outcome in industries as diverse as health, retail, insurance, manufacturing, and finance.

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