area9
LYCEUM

IN DEPTH
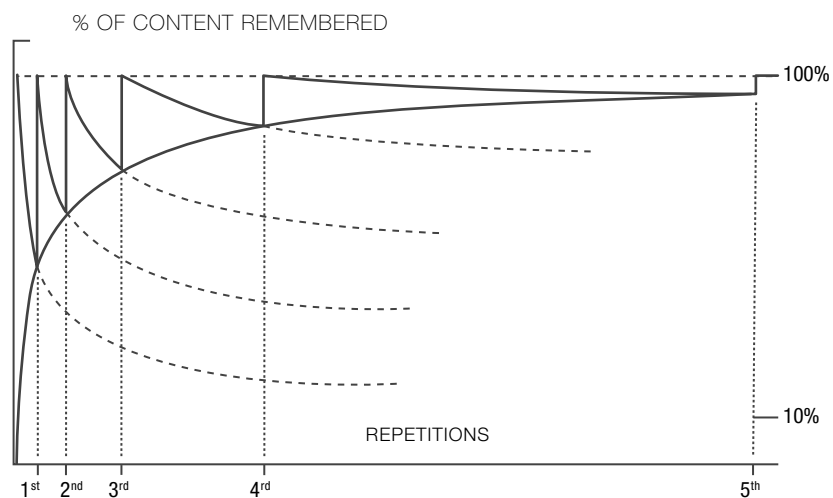# REFRESH

ADAPTIVE LEARNING IN FOUR DIMENSIONS

01

INTRODUCTION

Learners forget 90% of what they learn within two weeks of the end of a course - unless you do something about it.

Traditional training treats learning as a one-time event—whether it is a one day class or a 45 minute course. An implicit assumption is that when the course is complete, the learning is complete. This assumption is wrong on at least two fundamental levels: just because the learner completed the course doesn't mean they learned anything; and what they did learn they are almost certain to forget if they don't reinforce it. Without reinforcement, you are wasting your learners' time and your company's money.

The 'forgetting curve' was first researched by Hermann Ebbinghaus in 1885 and has been studied throughout the last 130 years. On average, says the research, people will forget 70% of what they learn within one day, and 90% within two weeks. The good news is that with targeted reinforcement—what we call 'refresh'—this can be corrected.

% OF CONTENT REMEMBERED

REPETITIONS

100%

10%

1st   2nd   3rd   4rd   5th

Murre JMJ, Dros J (2015) Replication and Analysis of Ebbinghaus' Forgetting Curve. PLoS ONE 10(7): e0120644. doi:10.1371/journal. pone.0120644

HOW REFRESH WORKS

During an adaptive training session in Content Curation Lab™ or Area9 Rhapsode™, our biological adaptive models track at a very granular level each learners' performance. The models predict what each learner is likely to forget based on how well they performed, and when they are likely to forget it.

The models then build a prioritized package of microlearning such that a learner can come back to the course to refresh their knowledge or skill, working through the list in a sequence controlled by the algorithms. Regardless of how many times the learner comes back, and regardless for how long, the algorithms constantly adjust the list to ensure optimum reinforcement.

REFRESH IN PRACTICE

In the real world, our algorithms have no control of how often or for how long each learner will refresh. They are therefore optimized to handle any situation.

The Area9 Rhapsode LEARNER™ and Content Curation Lab dashboards automatically show the learner what needs refreshing, and can trigger email and other notifications.

With Area9 Rhapsode™, refresh even works with Learning Management Systems that don't even understand the concept of refresh. Area9 Rhapsode™ automatically creates a SCORM refresh module that makes sure that the learning sticks.
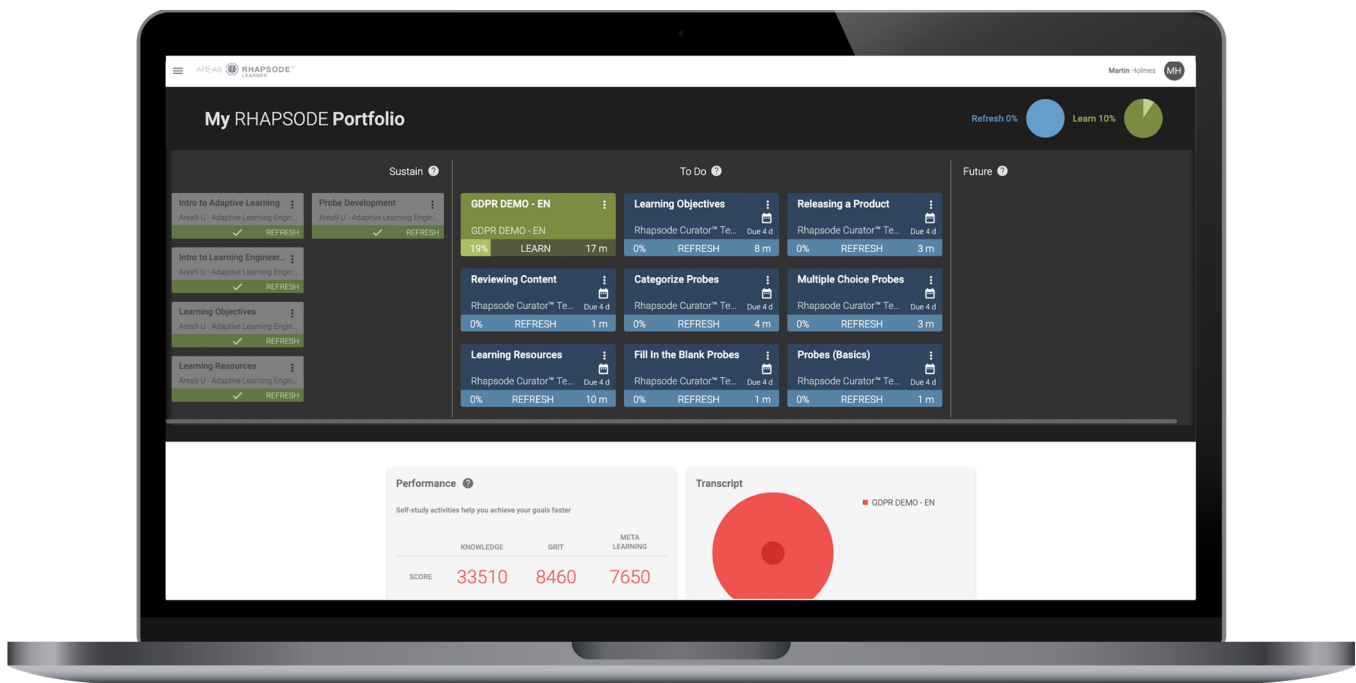
03

AUTOMATICITY

In Area9 Rhapsode™ we introduce the idea of automaticity—practicing something enough so that it becomes second nature. We do not need to achieve automaticity on everything we learn but life would be impossible if everything required concerted, focused mental effort. Driving a car would be impossible due to the massive cognitive overload.

In the business world, automaticity plays two key roles. Firstly, under stress people revert to their stored behaviors. This is exactly the time you want them to do the 'right thing'—whether that is responding to a fire or dealing with a difficult customer. Here achieving automaticity can have profound consequences.

Secondly, achieving automaticity frees up cognitive processing power and saves time. Yes, it is possible to look almost anything up these days, but it makes much more sense to be able to do common tasks without resort to Google.

CONCLUSION

The forgetting curve is an insidious problem that has been largely ignored by teaching practice through the last century.

Refresh provides a simple yet effective mechanism to dramatically improve learning performance and return on investment for all learners.

LEARNER DASHBOARD

Area9 Rhapsode's learner dashboard is designed to provide additional guidance for the learner on which modules need refreshing, and how long the refresh will take.

Depending on the particular implementation, both Content Curation Lab and Area9 Rhapsode can proactively notify the learner that it is time to recharge/refresh. The ease or difficulty of this depends on the particular notification infrastructure in place.

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