Applying Learning: How to Combat the Ebbinghaus Forgetting Curve

QUICK! Memorize these words!

- Titrate
- Covalent
- Electron
- Aqueous
- Bond

- Spaced
- Accessible
- Engaging
- Community
- Relevant

Today's Presenter



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SOFTWARE

Agenda

- Introduction to Ebbinghaus
- The Experiment
- The Curve
- Factors Influencing Memory Retention
- Combatting the Forgetting Curve
- Q&A





Introduction



Who was Hermann Ebbinghaus?

Hermann Ebbinghaus (1850- 1909)
German experimental psychologist – One of the FIRST!
Developed a passion for teaching and testing new ideas through experimentation
Significant contribution to the study of Memory and Learning





Modern Experimental Support



Roediger III, H.L.. Agarwal, P. K., McDaniel, M.A., & McDermott, K.B. (2011). Test-enhanced learning in the classroom: Long-term improvements from quizzing. Journal of Experimental Psychology: Applied, 17(4), 382-395

Tulving, E. (1967). The effects of presentation and recall of material in free-recall learning. Journal of Verbal Learning and Verbal Behavior., 6(2), 175-184.

Chun, B.A., & Heo, H.J. (2018). The effect of flipped learning an academic performance as an innovative method for overcoming Ebbinghaus' forgetting curve. Proceedings of the 6th International Conference on Information and Education Technology, 56-60.

Poll 2 Have you ever tried to "CRAM" for an Exam?

Cramming for Exams!



How many words do you recall???

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What's the Science behind this?

Must Strengthen Connections (long term)



Encoding

Short-term memory, uses observations, connects memory traces of what we've seen

Consolidation

Time dependent, brain replays/reviews the learning, sets up the new knowledge into neural pathways

Retrieval

Accessing and using new knowledge, application is key

Brown, P.C (2014) Make it Stick, Harvard University Press



How do we get better?

(SOME) Methods to Combat the Forgetting Curve **1. Spaced learning** 2. Make learning accessible 3. Keep it engaging **4. Create a learning culture** 5. Make it relevant

1. Spaced Learning



Re-enforce Materials Regularly

What does that mean?!





Sprinkle, sprinkle, splash, soak, sprinkle!

What to do: Use Retrieval Practice

• Test learners by practice – application is best, but recall is fine.

Overall, you should perform retrieval practice on your course materials several times, with accuracy improving each attempt.







Rohrer, D, Increasing retention without increasing study time, Current Directions in Psychological Science, 16(4) 183-186

2. Make Learning Accessible



Structure learning to be convenient to learners' schedules.







Encourage knowledge building through self-study.







Make information easier to digest from the get-go.





Microlearning

Delivers short bursts of content for learners to study at their convenience. Bite-sized sessions of 10 minutes or less!



Benefits



ATD Blog : Just how Micro is Microlearning, May 22, 2017

Learning Everest Blog : Just how Micro is Microlearning, May 22, 2017

3. Keep it Engaging

"Burnout is the symptom; stress is the source" – Hamza Khan



APPLIED LEARNING STRATEGIES LEARNING RETENTION RATES

Mix up content resources like videos, images, documents, exercises, webinars, and

workflows.

 Try and determine ways to make learning active!

Khan, H. *The Burnout Gamble*, Calisto Publishing 2021 Adapted from NTL Institute of Applied Behavioral Science and Learning Pyramid

Workflows



3. Save the drawing file.

COMMENTS Feedback/Suggestions for Publisher

4. Create a Learning Culture

- Encourage learning by making it as enjoyable as possible
- Actively support knowledge-sharing within your organization – training days, workshops, or live events
- Create events or activities that highlight a certain generations strengths, then repeat for the other generations



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5. Make it Relevant



- Make training relevant to your learner's job function or role.
- Include scenarios or examples that are relatable to everyday.
- Relate the information being learned to stuff they already know.
- Make sure they understand WHY the training will help them.

What did we Learn?



- Ebbinghaus proved to us that people forget stuff quickly!
- Unless they take purposeful steps to remember it!
- Understanding how we retain information allows us to maximize our retention.
- There are 5 practical strategies built into Pinnacle Series which directly address the Forgetting Curve.

One Last Time! How many words do you recall???

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Questions?





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