

## How People Learn and Why They Don't Change

Roy Pollock, Chief Learning Officer  
The 6Ds Company

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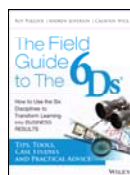
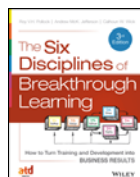
## Your Facilitator



**Roy Pollock**  
**CLO, The 6Ds Company**

Prior experience includes:

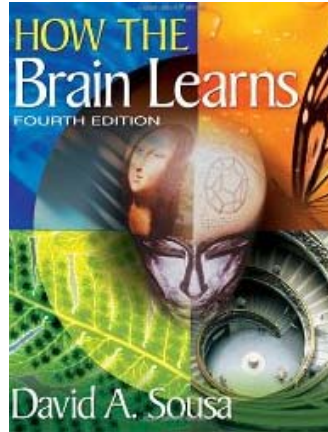
- Asst. Dean, Curriculum, Cornell
- President, IDEXX Informatics
- Vice President, Sales and Marketing, Pfizer
- Chief Learning Officer, Fort Hill Company



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## Getting Your Money's Worth Today

Participate  
**Ask**  
Challenge  
Share  
Be Present



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### Your Turn

#### What Do You Think?

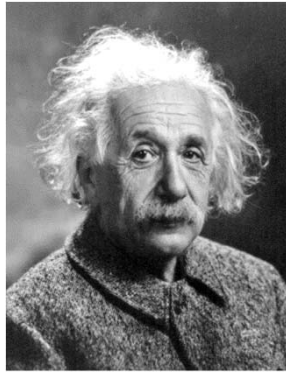
- ▶ You have suffered a heart attack. If you don't change your lifestyle, you will die.
- ▶ What is the probability you will change?
  - ☐ 100%
  - ☐ 85%
  - ☐ 66%
  - ☐ 50%
  - ☐ 33%
  - ☐ <25%



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Ref: Deutschman, A. (2005). Making change. *Fast Company*, May, 52-62.

## Change is Required



“One definition of insanity is to continue to do the same thing but expect a different result.”

—Albert Einstein

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### Your Turn



How long does it take to establish a new habit?

- A. 1 day
- B. 7 days
- C. 21 days
- D. 60 days
- E. 120 days

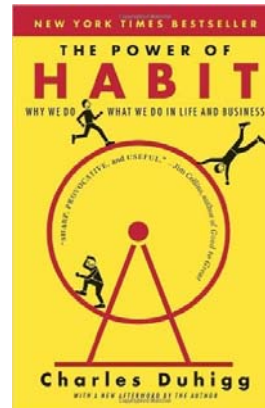


Ref: Lally P, et al (2010) *Euro J Soc Psychol* 40:998–1009.

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## Changing Behavior Is Hard

- Requires daily practice for two months or more
- The old habit never goes away.



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## Prochaska's Stages of Change



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## Change is Hard

“It is not hard to stop smoking. I have done it a hundred times...

—Groucho Marx



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## Why Is Change So Hard?

- ▶ We are much more creatures of habit than we like to admit.
- ▶ Many of our behaviors are triggered by environmental cues
  - ▶ Habits are not conscious decisions

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**Your Turn**

## True or False?

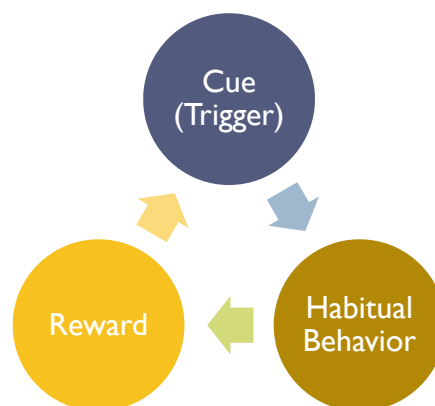
- ▶ Using smaller plates causes people to eat less.

☐ True

☐ False

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## The Habit Loop



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## Fundamental Logic of Training



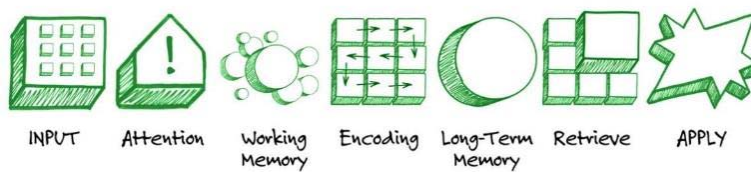
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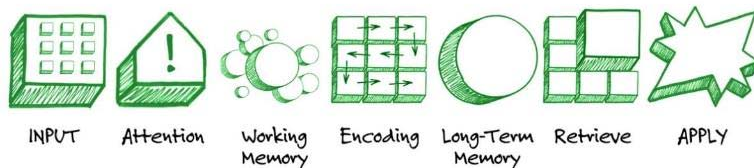


**Learning x Transfer = Results**

## Learning, Memory and Performance



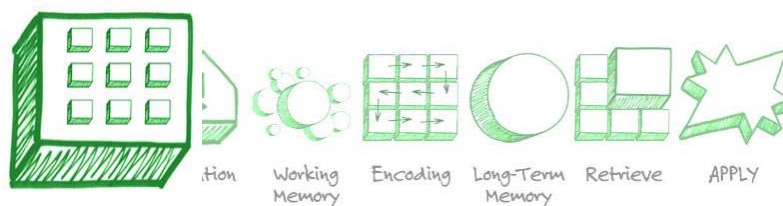
## Which is the greatest bottleneck?



Put a mark below the step that you think is the most important bottleneck.

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## Learning, Memory and Performance



**Input:** Any sensory modality—visual, auditory, tactile, feelings.

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### What Do You Think?

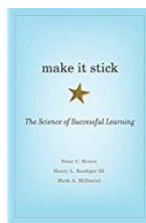
Which statement is correct regarding learning styles?

- A. People learn better when taught in their preferred learning style.
- B. There is no evidence that learning styles make any difference.

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### Match the Method to the Subject

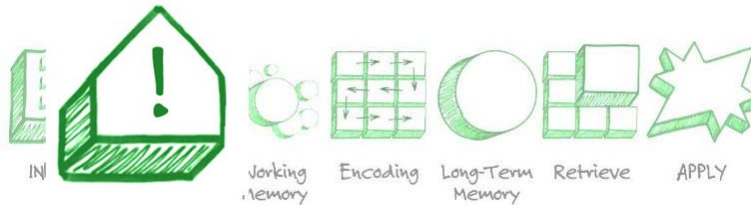
- ▶ “When instructional style **matches the nature of the content**, all learners learn better, regardless of their differing preferences ...”



--Brown, Roediger, and McDaniel (2014) *Make it Stick*

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## Learning, Memory and Performance



**Input:** Any sensory modality—visual, auditory, tactile, internal sensations.

**Attention:** People can only learn what they attend to.

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### What Do You Think?

How long can an adult pay attention in class without some kind of change of pace?

- a) 15 seconds
- b) 2 minutes
- c) 9 minutes
- d) 20 minutes
- e) 60 minutes
- f) 90 minutes

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## Use Hooks to Recapture Attention

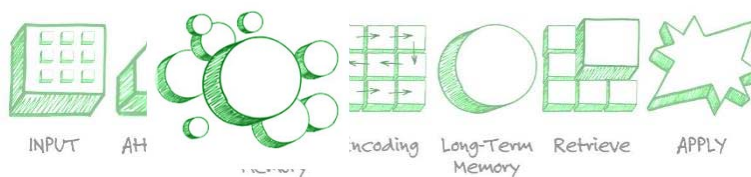
“After 9 minutes and 59 seconds the audience's attention is getting ready to plummet to near zero.”



John Medina,  
author, *Brain Rules*

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## Learning, Memory and Performance



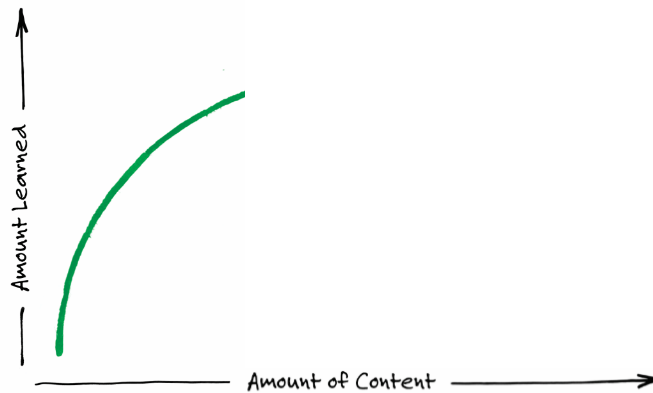
**Input:** Any sensory modality—visual, auditory, tactile, internal sensations.

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**Working Memory:** Like RAM, holds info for further processing; limited capacity.

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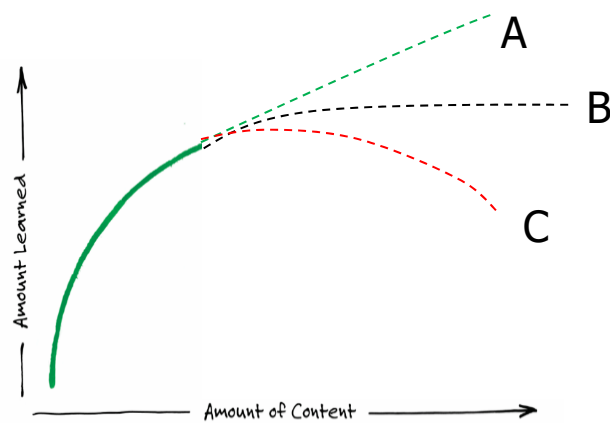
## Learning vs Amount of Content



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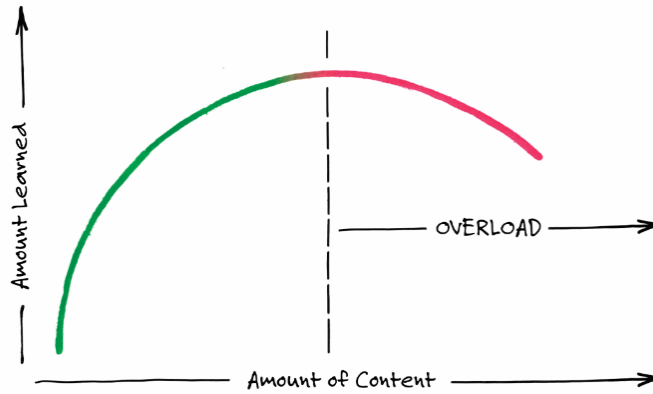
Your Turn

What is the relationship?



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## Learning vs Amount of Content

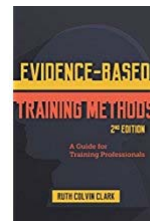


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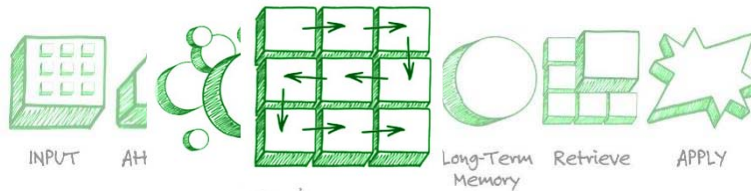
“Working memory capacity is needed to process new information for learning to occur.

“But when we load it up with content or irrelevant work, that process is corrupted.

“We call this *cognitive overload*.”



## Learning, Memory and Performance



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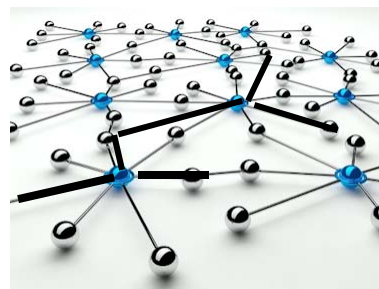
**Working Memory:** Like RAM, holds info for further processing; limited capacity.

**Encoding:** Creates “handles” for later retrieval; links new to existing knowledge.

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## Learning is Linking

- ▶ Ease of retrieval depends on
  - ▶ Number of connections
  - ▶ Frequency of use
- ▶ Help learners
  - ▶ Create rich networks
  - ▶ Reinforce them
- ▶ Don't overload the process



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## Most Common Problem: Too Much Content

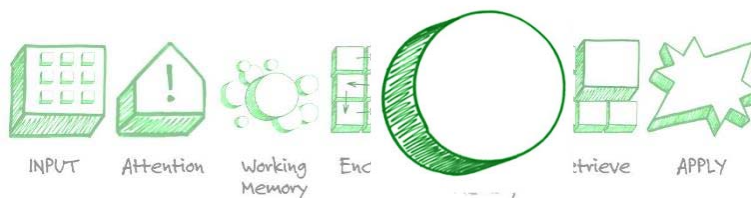
- ▶ Content covered is NOT content learned
- ▶ Just because you “went over it” in class, does not mean it was learned!



Clark, R. C. (2017). *Evidence-based training methods* (2nd ed.). Alexandria, VA: ATD.

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## Learning, Memory and Performance



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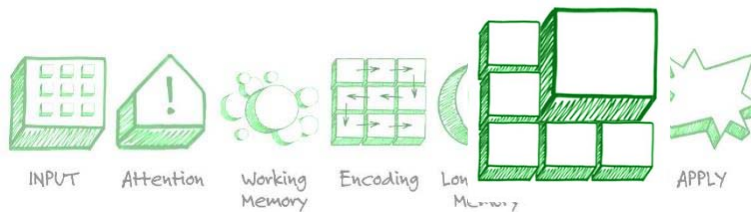
**Working Memory:** Like RAM, holds info for further processing; limited capacity.

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**Long-term Memory:** Brain’s hard drive; requires physical changes in brain.

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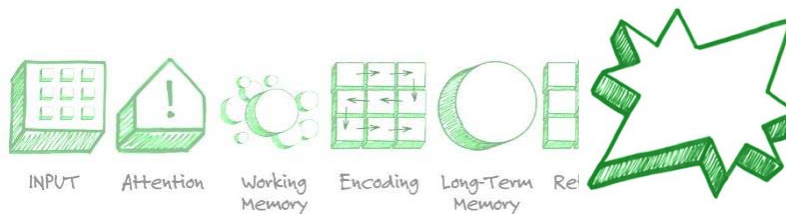
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**Retrieval:** The more often the memory trace is used, the stronger it becomes.

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**Retrieval:** The more often the memory trace is used, the stronger it becomes.

**Application:** The ultimate goal of training; how value is produced.

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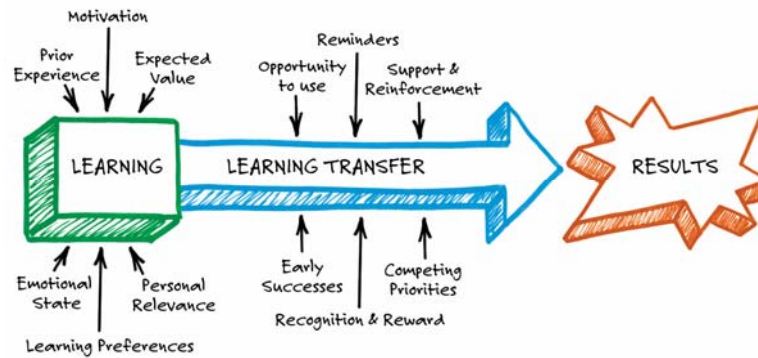
**Learning x Transfer = Results**

Your Turn

### What Impacts Transfer?

- ▶ In chat, list the factors that affect whether or not new skills and knowledge are applied on the job.

## Many Factors Affect Learning Transfer



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## Transfer Climate



Rouiller and Goldstein defined the transfer climate as:

- ▶ all of the **practices and procedures** in an organization
- ▶ that signal to people **what is important.**

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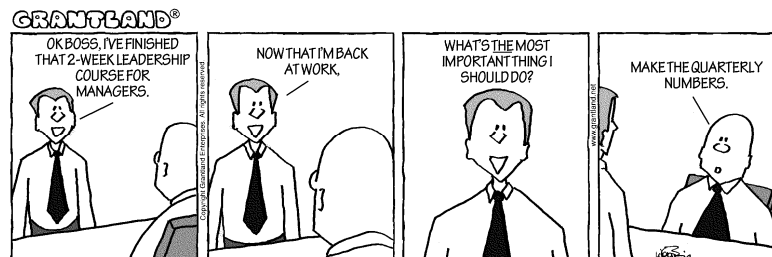
## BOTTOM LINE

- The transfer climate determines the answer to the “Will I?” question.



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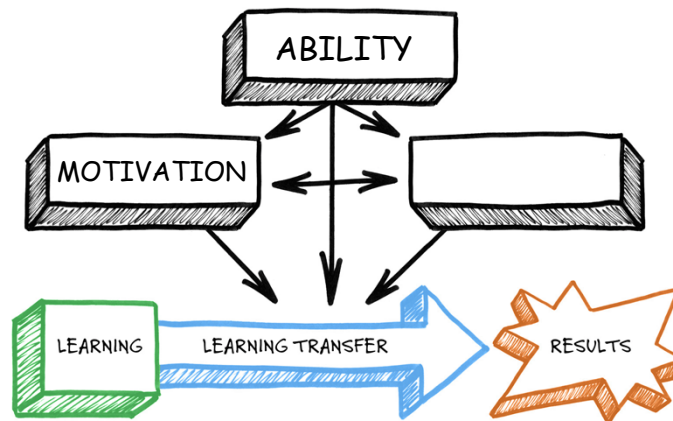
## An Unhealthy Transfer Climate



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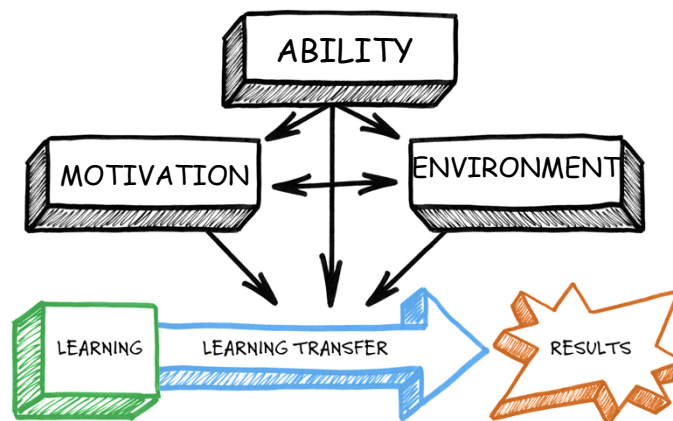
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## A Transfer Climate Model



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## A Transfer Climate Model



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## Summing Up

- ▶ Improving performance requires changing behavior.
- ▶ Changing behavior usually means changing habits.
- ▶ Changing habits is hard.
  - ▶ It requires sustained effort over time.
  - ▶ Mere knowledge of what to do is not sufficient

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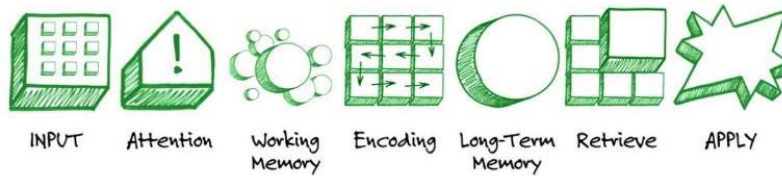
## Summing Up



- ▶ Effective training requires optimizing both learning AND learning transfer.

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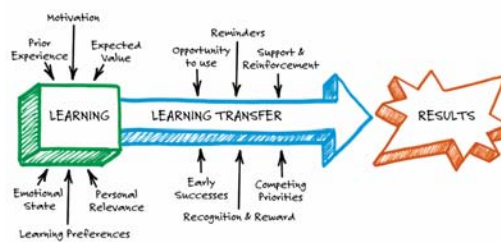
## Summing Up



- ▶ Great learning takes into account how people learn
  - ▶ Takes time and active engagement.
  - ▶ There are limits to how much people can learn in a given time.

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## Summing Up



- ▶ Effective transfer requires treating training as a process or journey, rather than an event.
  - ▶ Providing sustained support, reminders, coaching, and encouragement along the way.

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## Want to Learn More?

- ▶ Additional information and ideas for implementation can be found in:
- ▶ See also:

