



**LEARNING RETENTION PROCESS**  
**&**  
**INSTRUCTOR INFLUENCE**

## 1. Stimulus Introduced (Lecture, Scenario, Video)

- **Brain Structures:** Sensory Cortex, Thalamus
- **Neurochemicals:** N/A (initial stage)
- **Instructor Influence:**
  - Use multiple sensory inputs (visual, auditory, movement)
  - Start with a bold question or story to grab attention
  - Connect new material to something familiar

## 2. Attention & Engagement

- **Brain Structures:** Prefrontal Cortex, Reticular Activating System
- **Neurochemicals:** Dopamine, Norepinephrine
- **Instructor Influence:**
  - Show relevance: "Here's why this matters on the street"
  - Use curiosity, novelty, or humor to keep attention
  - Limit distractions and chunk material into segments

## 3. Working Memory Activation

- **Brain Structures:** Prefrontal Cortex, Hippocampus
- **Neurochemicals:** Acetylcholine
- **Instructor Influence:**
  - Ask brief questions or use think-pair-share
  - Limit overload—focus on 3–5 key points at a time
  - Reinforce important concepts verbally and visually

## 4. Encoding to Long-Term Memory

- **Brain Structures:** Hippocampus, Amygdala
- **Neurochemicals:** Glutamate, BDNF
- **Instructor Influence:**
  - Use stories, case studies, or scenarios
  - Ask students to rephrase or teach the material
  - Tie content to emotion, relevance, or lived experiences

## 5. Feedback Loop (Correct or Incorrect Answer)

- **Brain Structures:** Anterior Cingulate Cortex, Prefrontal Cortex
- **Neurochemicals:** Dopamine (when correct)

- **Instructor Influence:**

- Give **immediate** feedback
- Use wrong answers to reinforce concepts without shaming
- Celebrate effort and strategy, not just being “right”

## 6. Sleep & Consolidation

- **Brain Structures:** Hippocampus → Neocortex (memory transfer)
- **Neurochemicals:** Melatonin, BDNF
- **Instructor Influence:**
  - Encourage proper rest and breaks
  - Space out reviews over days, not just cram sessions
  - Provide simple review prompts post-class

## 7. Retrieval Practice

- **Brain Structures:** Hippocampus, Prefrontal Cortex
- **Neurochemicals:** Dopamine (when success occurs)
- **Instructor Influence:**
  - Use daily Quizlets, quick drills, Kahoots, flashcards
  - Promote peer-to-peer recall: “Teach it to your partner”
  - Encourage making mistakes in a safe environment

## 8. Application & Transfer

- **Brain Structures:** Prefrontal Cortex, Motor Cortex
- **Neurochemicals:** Dopamine, Epinephrine (during challenge)
- **Instructor Influence:**
  - Create real-world scenarios or decision-making drills
  - Use tabletop exercises or simulations
  - Reflect afterward: “What worked? What could you improve?”

# Why Most Training Stops at Step 3—And What That Means for You

By the time most cadets leave the classroom, they’ve experienced the first three stages of the learning process: **Stimulus, Attention, and Working Memory Activation**. And then... that’s it. No follow-up. No review. No application. Just an assumption that “we covered it,” and it will stick.

But here’s the truth: **Working memory is short-term**. It’s where your brain temporarily holds information before deciding what to toss or what to keep. If the material isn’t reinforced, emotionally connected, or practiced repeatedly, it fades—fast.

This is where police training often fails—not in good intentions, but in **lack of design for retention**. We focus on exposure, but not encoding. We assess memorization, but not mastery. We demonstrate skills once, but don’t revisit them enough to build muscle memory.

## What’s Missing?

Many students come to class, engage, and even take notes—but leave **without a prescription for long-term retention** of knowledge **or** skill. Without further action, what was learned is often lost.

The result? Officers who were “trained” on something but can’t recall it under stress—or can’t apply it months later when it matters most.

## Locking It In: The Goal Is Myelination

Both instructors and students have a role in breaking through this wall. **The goal isn’t just exposure—it’s myelination.**

Myelination is the biological process where your brain wraps nerve fibers in a fatty sheath (called myelin), making signals faster and more efficient. It’s how habits are formed, skills become automatic, and knowledge becomes part of who you are. But it only happens through **repetition and application**.

So here’s the bottom line:

**No matter how well something is taught—if it isn’t retrieved, reviewed, and applied, it’s lost.**

### What Instructors Can Do:

- Embed **retrieval practice**: quizzes, questions, teach-backs
- Use **emotion, relevance, and repetition** to strengthen encoding
- Build time into your schedule for review—not just coverage

### What Students Must Do:

- Review material regularly over days and weeks
- Practice explaining or teaching it to someone else

- Revisit skills through simulation, drills, or visualization
- Get rest—**sleep consolidates memory**

Getting past Step 3 takes work, but it's the difference between a student who "passed the class" and one who performs confidently under pressure months or years later.

Retention is a strategy.  
Mastery is a choice.  
**Myelination is the mission.**