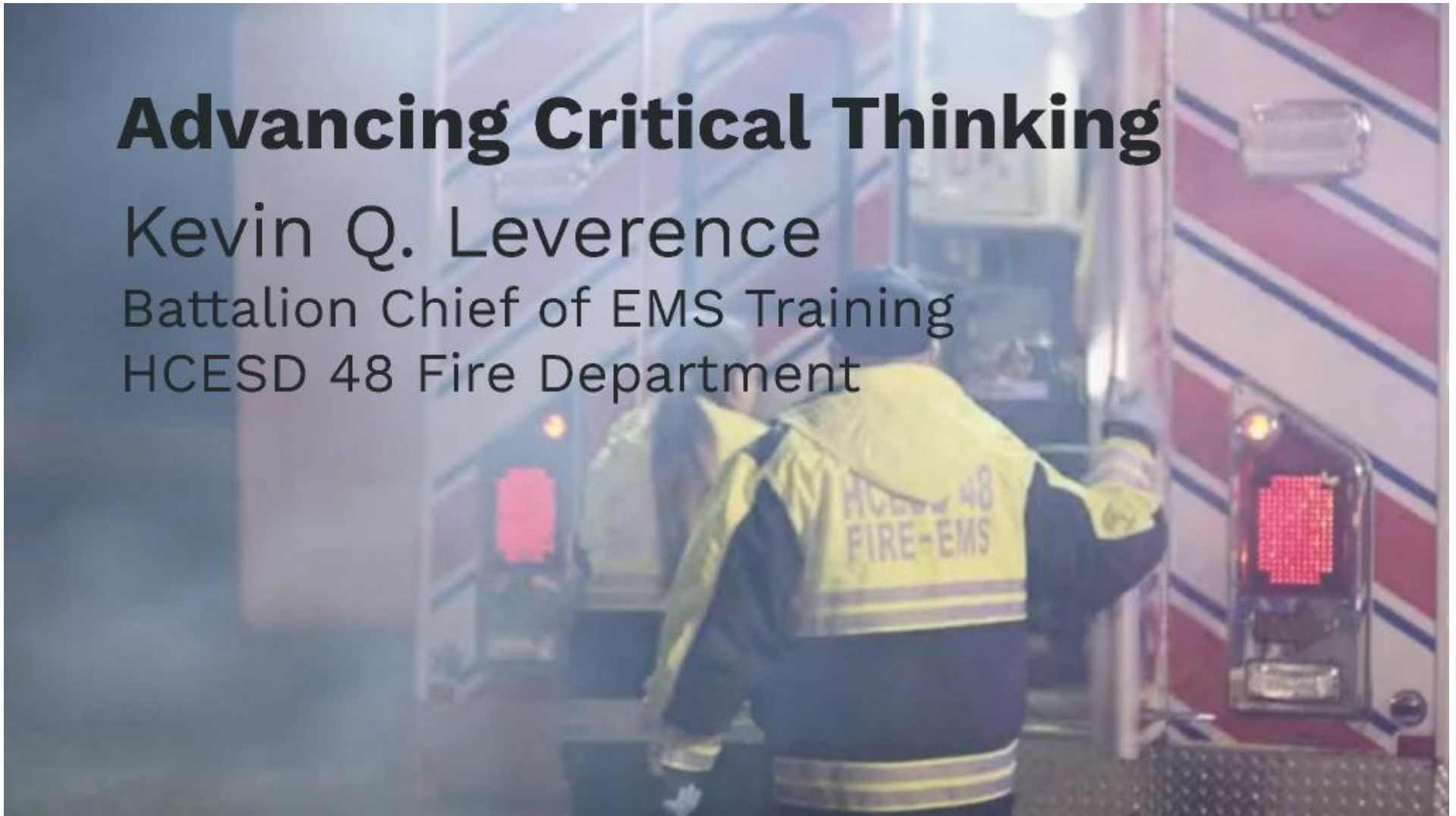


# Advancing Critical Thinking

Kevin Q. Leverence

Battalion Chief of EMS Training

HCESD 48 Fire Department



You can't learn to swim  
by reading a book

familiar -> comfortable -> proficient

Nothing to disclose





# Why Simulations?

- Practice
- Get better
- Evaluations
- Hazing

# Why Simulations?

- **Sensory-Stimulus Theory** - Laird
  - more sensation = retention
- **Reinforcement Theory** - Skinner
  - behavior as a function of consequences
- **Cognitive-Gesalt** - Burns
  - experience to find meaning and develop insights
- **Facilitation Theory** - Laird
  - learners consider new ideas

# What else is there to say?

- State of Simulations
  - Keepin' it Real
- Designing Simulations
  - Jumping in the Deep End

# Designing Simulations

BP 82/46, HR 100, RR 38, SpO2 86%, EtCO2 61, BG 40,  
temp 101.1 F, 12 lead Sinus Tachycardia, GCS 8

Clinical Benchmark 1: recognize ventilatory compromise – BVM ventilation

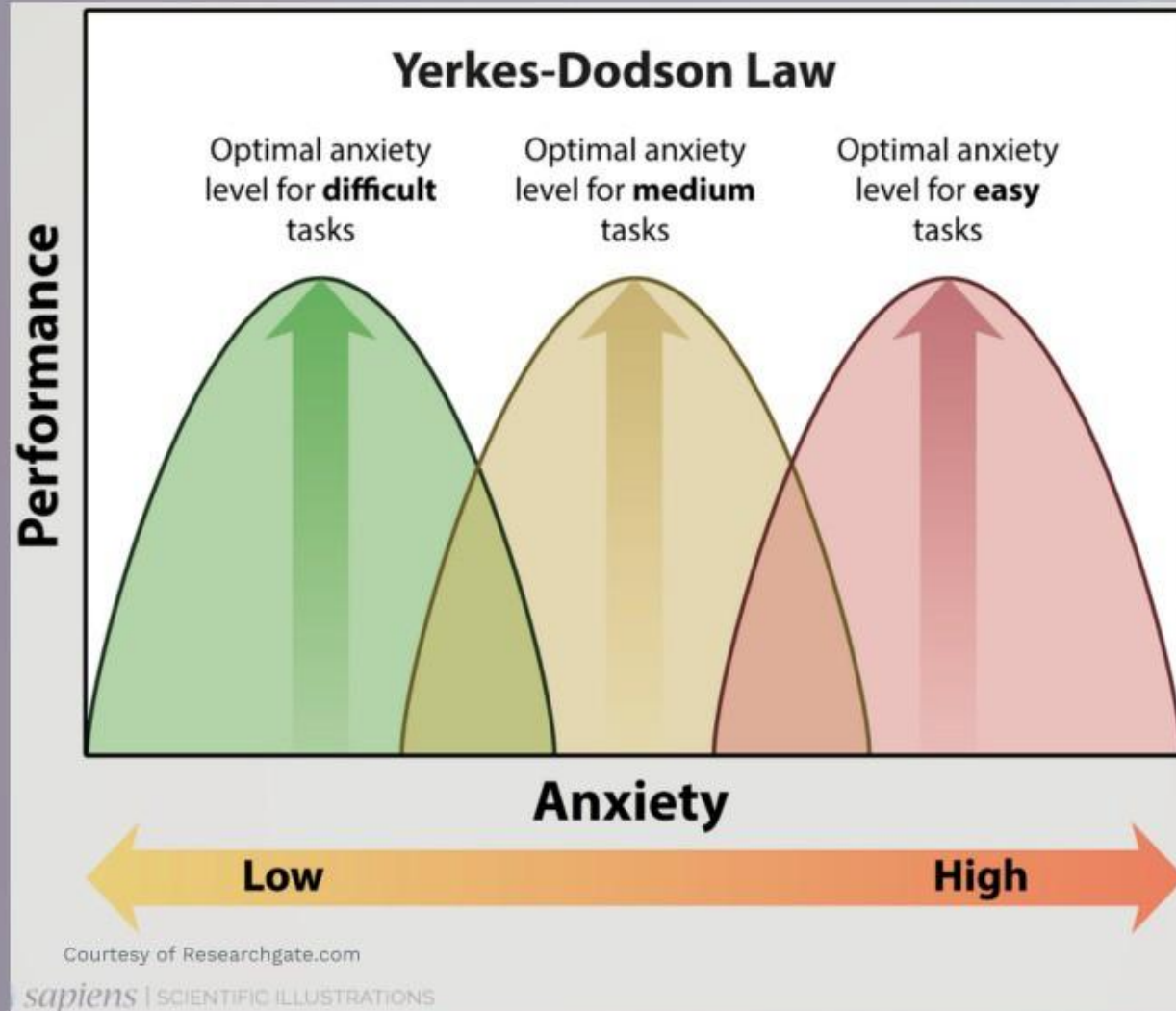
Backstop: tachypnea - hypoxia – bradycardia – HOLD

Clinical Benchmark 4: recognize hemodynamic instability – fluid challenges and pressors

Backstop: hypotension – low end tidal – PEA

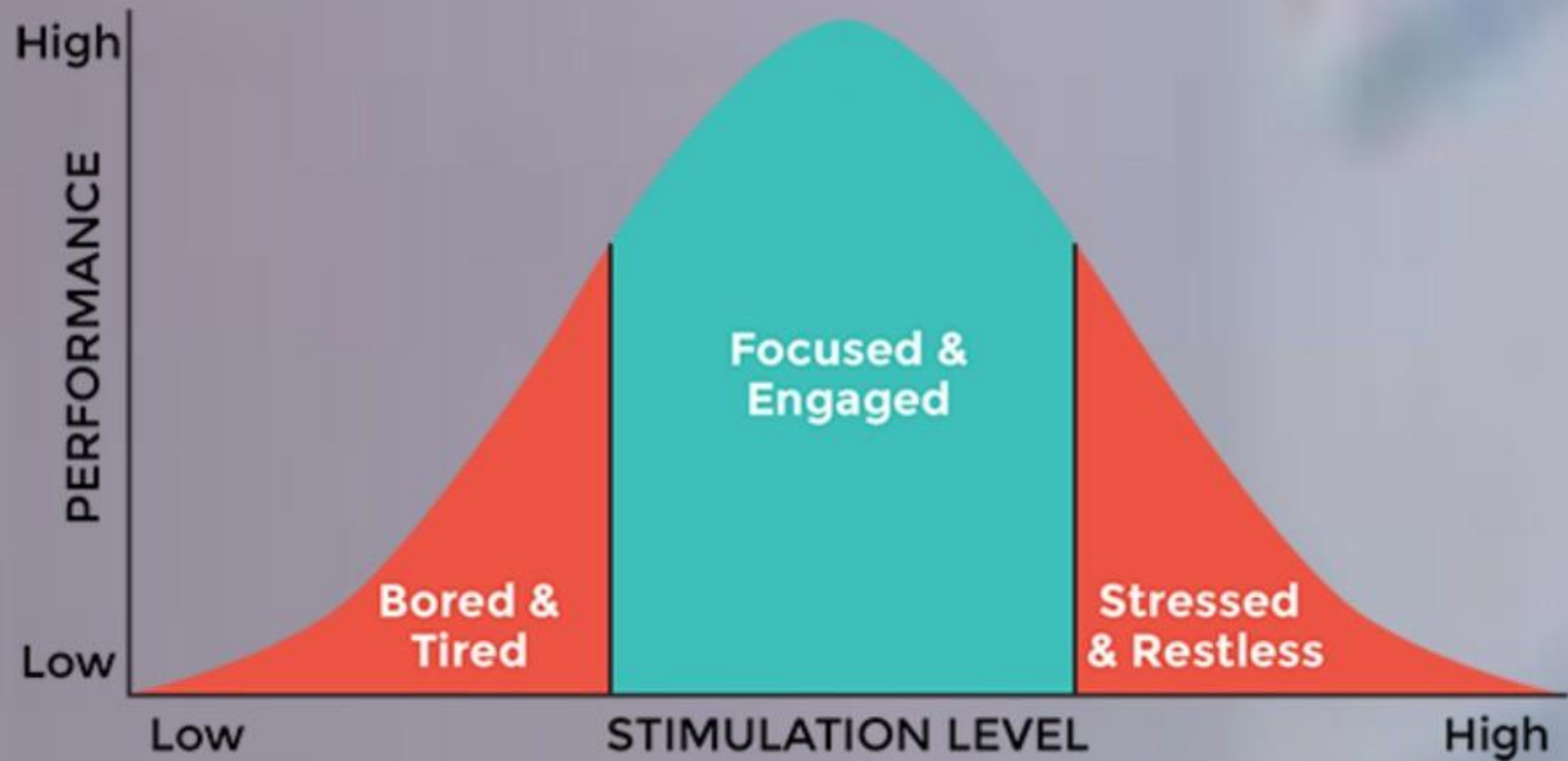




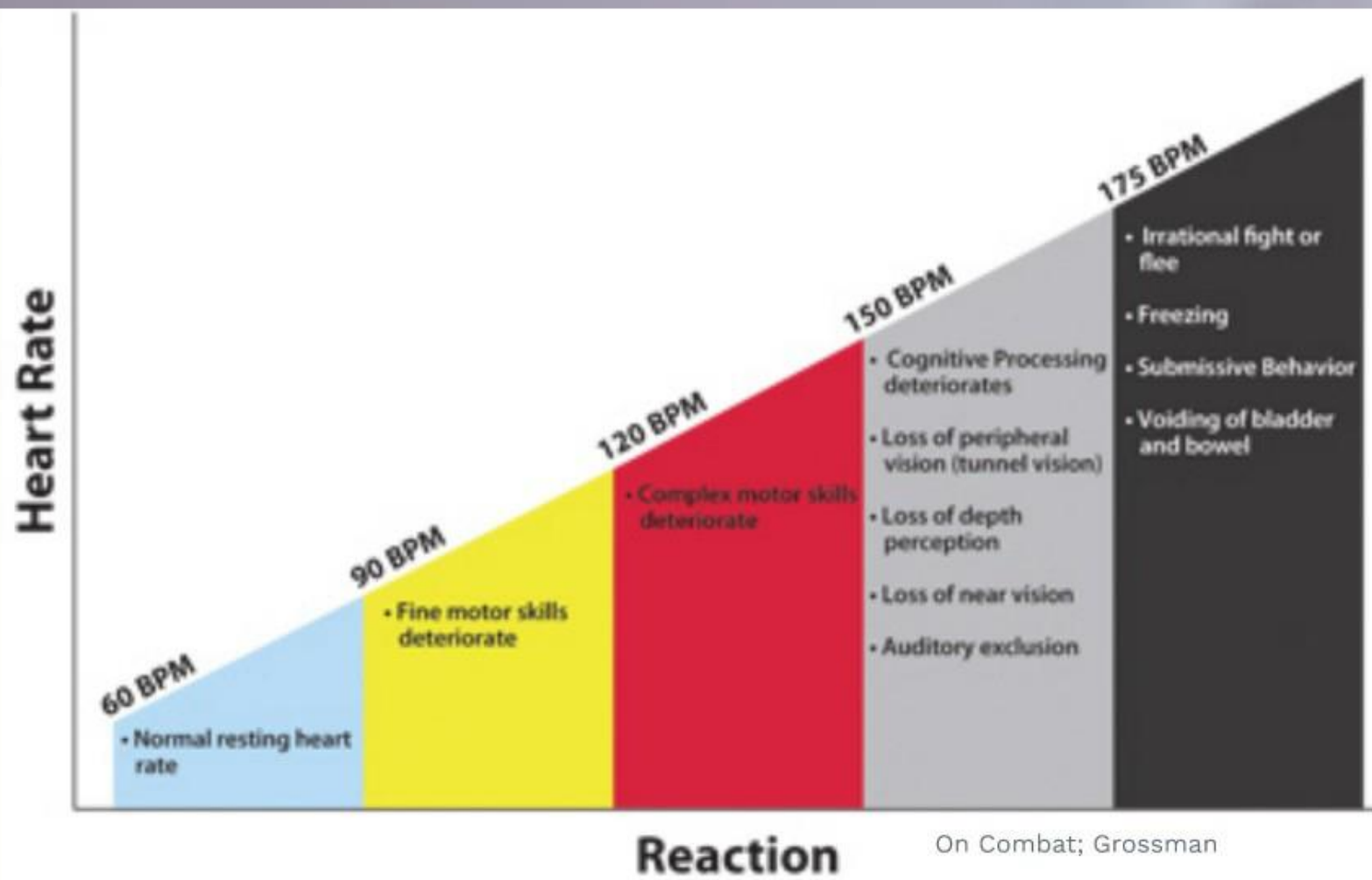


# Yerkes-Dodson Law

## OPTIMAL PERFORMANCE

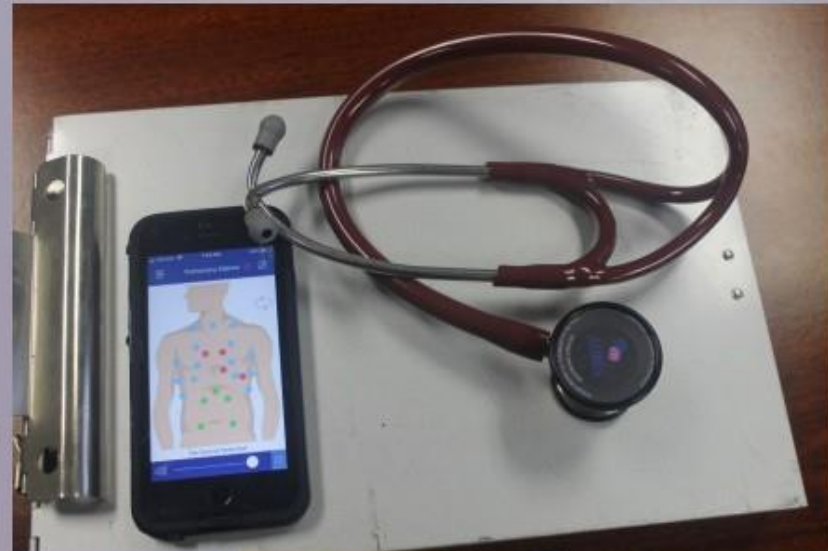


Courtesy of Researchgate









# What are we really practicing anyway?

## Breathing Control

- Failure to Exhale
- Trapped and Anxious
- Accessory Muscle Use
- Slow and Rhythmic
- Diaphragmatic

## Visualization

- Crisis Rehearsal
- Anticipation
- Surprise Factor
- Different Approaches

"I can see myself screwing this up."

## Self Talk

- Always Happens
- Toxic Thinking
- Placebo Effect
- Contagious Negativity
- If vs When

- Practicable Skill  
How?

- Redirection
- Tactical Word Choice
- Process vs Outcome
- Identify What Needs to Happen

- Practicable Skill  
How?

- Redirection
- Tactical Word Choice
- Process vs Outcome
- Identify What Needs to Happen



## Deep Water Swim Lessons

- **Training Debriefings & Letting Go of Perfect**

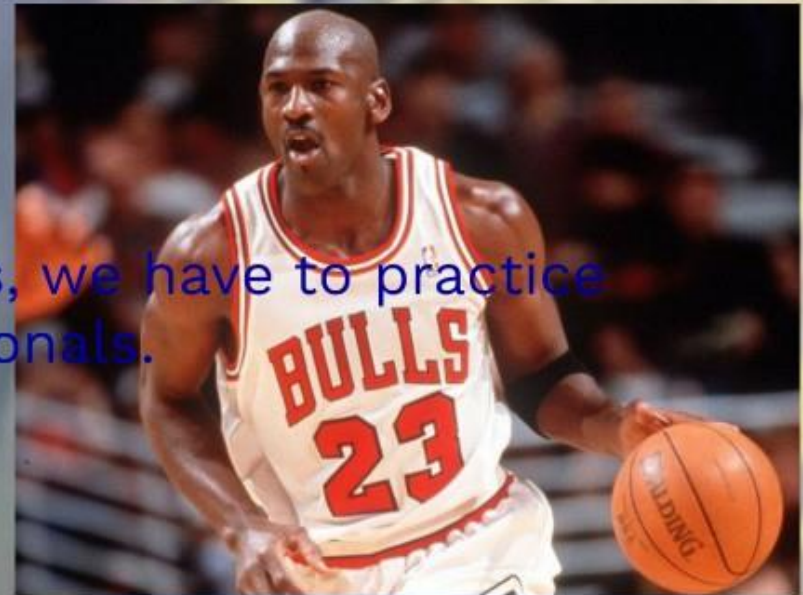
- Socratic Method
- Jennifer Fox
- Growth Mindset

- **Teaching to Our Expectations**

FOR you  
WITH you  
WATCH you  
YOU do

## Closing Thoughts...

If we want to be professionals, we have to practice being professionals.



**We exist in a high-stress, high-stakes, time-competitive operating environment where we cannot bank on success as a coincidence.**



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