



ON CRITICAL THINKING

IT TAKES HABITS OF MIND AND PATTERNS OF INQUIRY

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WHY WE CARE

- **For the Air Force**
 - *In our Future Operating Concept*
 - **Chief of Staff priority – it “is about the journey...about the campaign of learning, and lighting a spark” (speech at The Brookings Institution)**
 - **SECDEF Mattis priority (and hopefully, still a priority)**
- **For all – apply to any discipline, or just in life**

OUR DNA GETS IN THE WAY

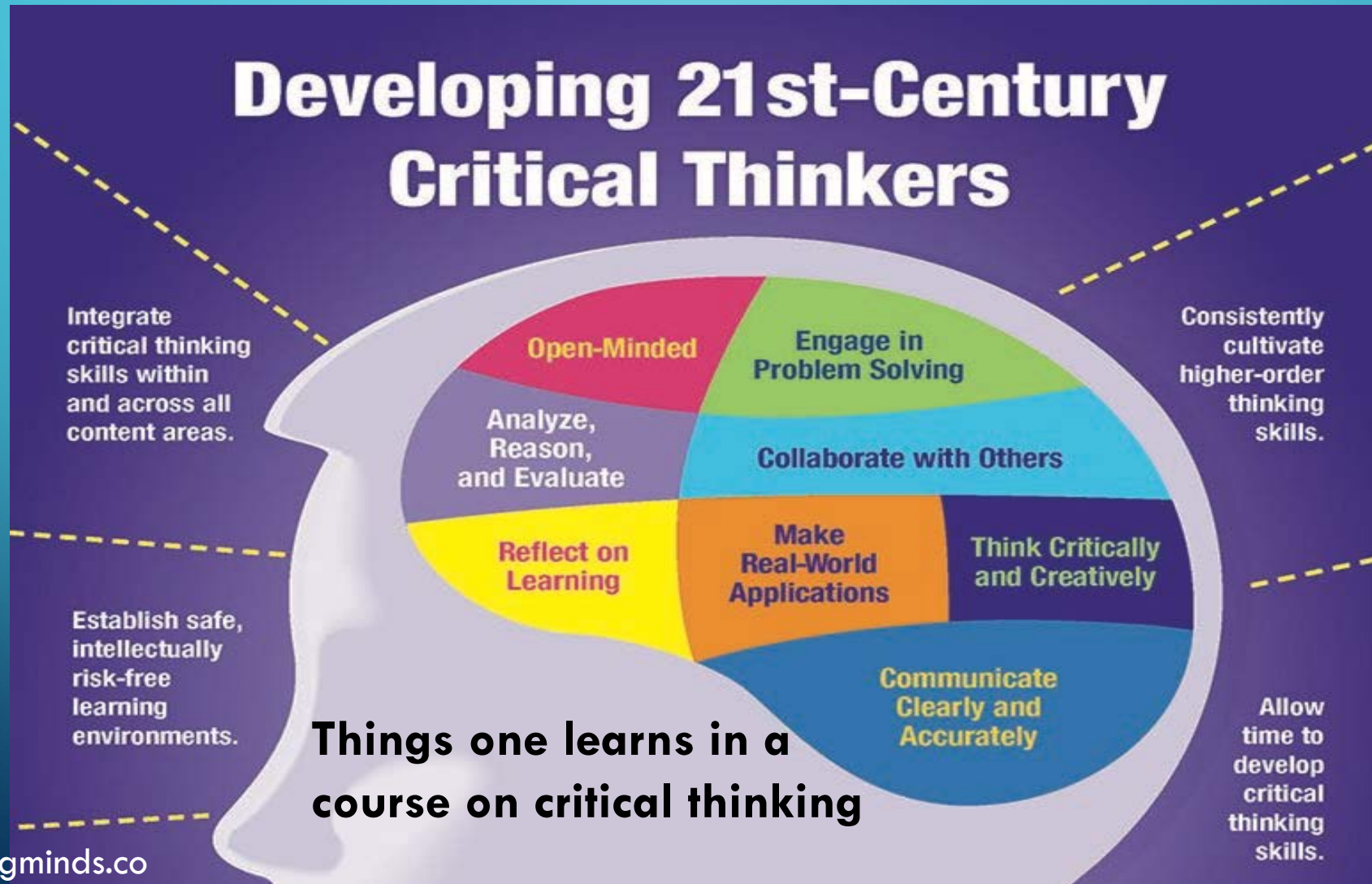
- **STEM focus + Type A personality = people who get things done**
 - Roll big rocks up big hills
 - But...questions we don't ask...
- **Ninth Air Force example**
- **So, how do we find & develop critical thinkers**
 - Some that are linear thinkers, and some who are abstract thinkers

DEFINING IT

- **“Critical thinking is the art of analyzing and evaluating thinking with a view to improving it.”**
- **“Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It requires rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcoming our native egocentrism and sociocentrism.”**

Source: Foundation for Critical Thinking

DO A COURSE & TAKE A TEST – RIGHT? (1)



DO A COURSE & TAKE A TEST – RIGHT? (2)

CALIFORNIA CRITICAL THINKING TEST

- Reasoning skills overall
- Analysis
- Interpretation
- Inference
- Evaluation
- Induction
- deduction

WATSON-GLASER CRITICAL THINKING APPRAISAL

- Test 1: Inferences
- Recognition of assumptions
- Deductions
- Interpretations
- Evaluation of arguments

WHAT DO THESE TESTS HAVE IN COMMON?

- They are standardized tests!
- Tests run at Air University during AY2015-2016
 - No statistical difference between
 - Air War College (senior officer course)
 - Air Command and Staff College (mid-grade officer course)
 - Squadron Officer School (junior officer course)
 - Only minor difference between ACSC and School of Advanced Air and Space Studies (favoring the latter)
 - IMHO...

How do “we”
prep for SAT/ACT
or GRE/LSAT...

...take a prep
course & learn
the test

QUESTION IS NOT “WHAT TO DO” – IT’S “WHO CAN DO”

- If “who” is the question, then “how” do we find them?
- **Space X example**
 - Yes, great grads from great engineering programs
 - But those who started with pinewood derby, rock'em sock'em robots, engineering competitions in college
 - finding creative, curious people solving mechanical problems

FINDING “WHO” FOR THE AIR FORCE

- **Not by testing; rather, by asking...**
 - **What music do you listen to?**
 - **What books did you read this year?**
 - **What journals do you read?**
 - **What magazines do you read &/or hobbies (beyond physical fitness)?**
- **In other words – who are the insatiably curious?**

THE KEY INGREDIENT: INSATIABLE CURIOSITY

- I can teach “you” habits of mind
 - Teaching the discipline of study
- I can teach “you” patterns of inquiry
 - Teaching “you” to find the frameworks of analysis
- But “you” have to bring insatiable curiosity to the table

CRITICAL THINKING IS A PATH, NOT A DESTINATION

- In our school, we spend 11 months helping our students
 - Establish *their* path
 - Develop their understanding of the patterns of inquiry
 - Teaching them to scope their problems
 - Because we can only promise them wicked problems, but never knowing how much time or other resources they will have to resolve their challenges

STAYING ON THE CRITICAL THINKING PATH

- We prepare them and put them on the critical thinker's path
- At that point, they own the development of their habits of mind and their patterns of inquiry
- When they stop developing habits and patterns and are no longer insatiably curious, then they are no longer on the path

QUESTIONS

Article available at:

https://www.airuniversity.af.edu/Portals/10/ASPJ/journals/Volume-33_Issue-4/V-Wright.pdf

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