

Are Fellows Adults? Applying Adult Learning Principles to Fellow Education

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Disclosure

- No financial disclosure
- No off-label use

Challenge Your Thinking



Common Complaints

■ Fellows don't want to

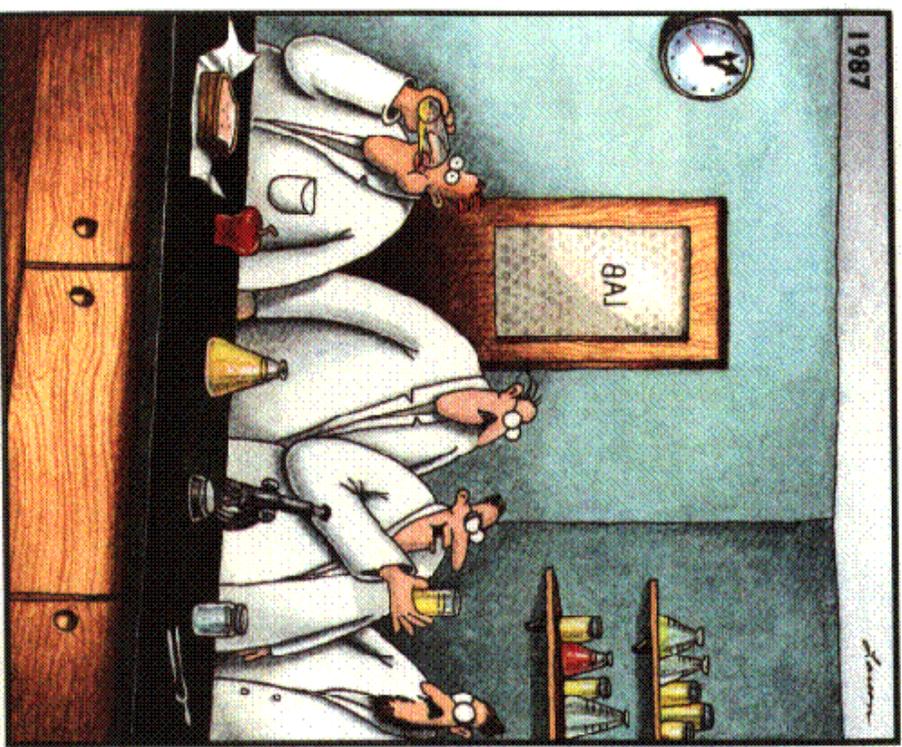


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Why Don't Fellows Want to Learn?

- Wrong assumption
- Wrong type of teaching
- They are learning
 - Just not what we want them to learn



"What the! ... This is lemonade! Where's my culture of amoebic dysentery?"

Adult Learners

- Proposed by Malcolm
- Knowles in 1970's
- Principle of
Andragogy – the art
and science of
helping adults learn
- Five components



Comparison of Pedagogy to Andragogy

| | Pedagogy | Andragogy |
|-----------------------------|-----------------------------------|---|
| Self-Concept | Dependent on teacher | Self-directed |
| Role of Personal Experience | To be built upon | As a resource |
| Learning Preparedness | Uniform across age and curriculum | Develops as a result of life experience |
| Learning Orientation | Subject centered | Task or problem centered |
| Motivation to Learn | External rewards and punishments | Internal desire and curiosity |

Self-Directed Learning

- In line with psychological development
- Learner must be proactive
- Five Components
 - Assessing one's needs
 - Formulating goals
 - Identifying resources
 - Choosing and implementing learning strategies
 - Evaluating learning alternatives

Self-Directed Learning

- The most important learning for all adults is learning to learn
- Adults need to know why they need to know
- Adults devalue their work if not validated by some external authority
- Requires effective facilitation

Problems With Self-Directed Learning

- Doctors are incapable of assessing their learning needs accurately
- “The true goal is what we desire at the end, not the beginning”
- No evidence that self-directed as opposed to teacher-directed learning improves learning outcome

Tracy J. BMJ 1997;315:1426

Self-Directed Learning

- Survey to Family Practice Physicians
- Attendance at CME workshops
- Decision to attend CME based on
 - Level of comfort with material
- Decision to attend CME not based on
 - Relevance to practice
 - Perceived knowledge gap

Fox RD. Med Educ 1984;18:275-81

Conduct A Needs Assessment

- 446 faculty at the School of Medicine, University of Alberta surveyed regarding learning needs (185 respondents)
- Junior Faculty
 - Effective grant writing, Effective goal setting
- Senior Faculty
 - Managing stress, Effective communication, Dealing with conflict

A Major Conflict is Occurring

- Needs assessment of fellows
- Didactic program
- **Yield**ing
from resident
- **Adult** design
reflects fellow's needs
- Cardiac Anesthesia – 26 areas
- Critical Care Medicine – **Structure**
- Pair **Child** areas – 51
- Pediatric Anesthesia – 16 areas

Learning Preparedness

- Child Learner
 - Not a problem
 - They have to go to school
- Adult Learner
 - Has a choice
 - Personal experience plays a major role



Personal Experience

- Plays a major role in adult learning
- Linking new learning to previous experiences
- Involves three different aspects of understanding:
 - Ideas – cognitive
 - Feelings – affective
 - Actions – psychomotor

Glicken AD. JVME 2004;31:268-272

Personal Experience

- **Good News**
 - Strong motivation for learning
 - Build upon life experiences
 - Connect new knowledge to previous experience
- **Bad News**
 - Biases
 - Less open-minded



Learning Preparedness

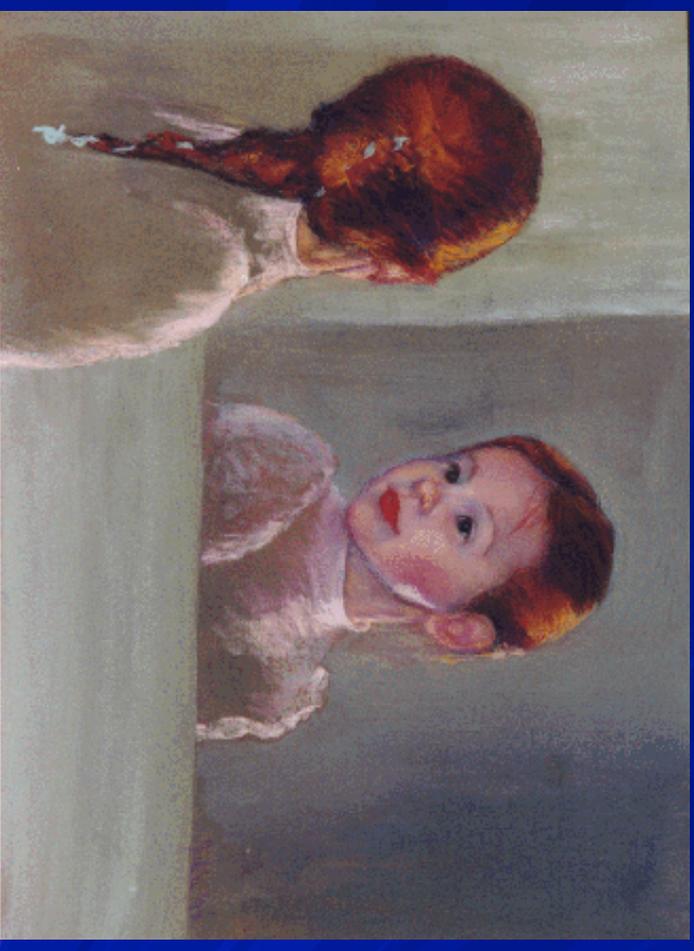
- Develops as a result of life experience
- Knowing-in-action
 - Application of learned principles to resolve situations
- Reflection-in-action
 - Deeper response to situations involving reflection upon response and discovering alternative approaches

Learning Preparedness



Reflection

- Reflection involves rethinking and revising
- Requires self-assessment and self-adjustment
- Difficult but necessary



Importance of Reflection

- 359 house officers in 7 Internal Medicine Residencies surveyed about training experiences
 - High amounts of personal growth is associated reflection (OR 2.9, CI 1.1-7.4)
 - Barriers to reflection
 - Time
 - Fatigue

Importance of Reflection

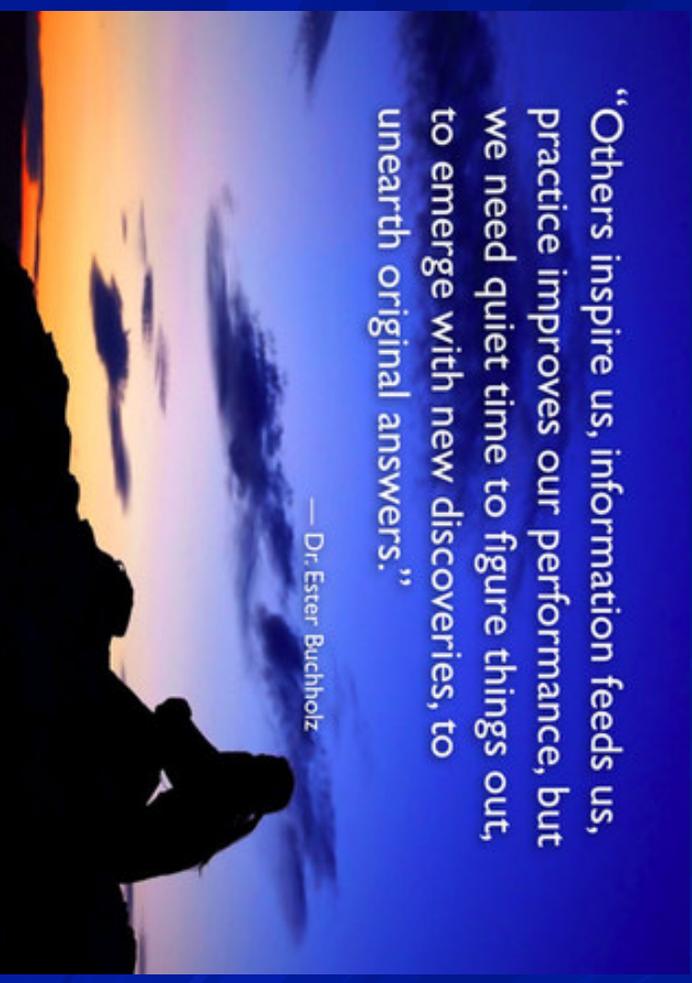
- Qualitative analysis of 64 faculty at Johns Hopkins
- Reflection was associated with
 - Personal growth
 - Improved sense of self
 - Increased productivity
 - Increased energy
 - Improved connectedness with others

Key to Helping the Fellow Learner

- Reflection
- 1 Kings 19:11-13
- All at once, a strong wind shook the mountain and shattered the rocks. But the Lord was not in the wind. Next there was an earthquake, but the Lord was not in the earthquake. There, there was a fire, but the Lord was not in the fire. Finally, there was a gentle breeze.

“Others inspire us, information feeds us, practice improves our performance, but we need quiet time to figure things out, to emerge with new discoveries, to unearth original answers.”

— Dr. Ester Buchholz



Learning Orientation

- Child Learner
 - Subject oriented
 - List of classes must take
 - No idea of why learning
- Adult Learner
 - Greater need to learn the “why”



Learning Orientation

- Task or problem driven
- Greater need to know why they should learn something
- Requires early and repeated integration of problem-solving and abilities to apply knowledge
- Ability to use knowledge effectively in new situations and diverse realistic contexts

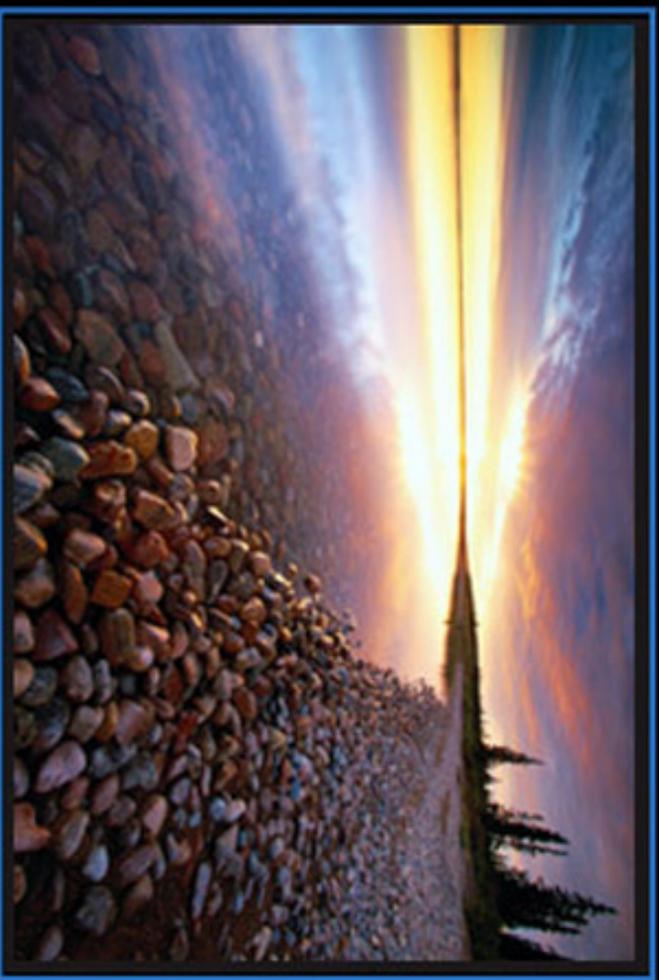
Assist the Fellow Learner

- Make the learning real-life situations
- Case Conferences
- Simulation



What Motivates the Learner?

- Child
 - Grades
 - Examinations
- Adult
 - Depends upon the learner's goals



MOTIVATION

IF A PRETTY POSTER AND A CUTE SAYING ARE ALL IT TAKES TO MOTIVATE YOU, YOU PROBABLY HAVE A VERY EASY JOB. THE KIND ROBOTS WILL BE DOING SOON.

Motivation

- Must come from within
- Often a life experience or situation stimulates the motivation to learn
- Must tap into most teachable moments
 - Quality Assurance
 - Case Conference
 - Difficult Case

Importance of Motivation

- Survey to 361 hospital personnel before CPR course assessed motivation
- Motivation scores correlated with performance during course

Hopstock LA. Resuscitation 2008;76:425-30

Means for Improving Motivation

- Enhance reasons for participation
- Decrease the barriers
 - Friendly, open atmosphere
 - Set difficulty level to make it challenging
- Recognize different learning styles
 - Visual - written rather than verbal
 - Auditory – verbal repetition and discussion
 - Kinesthetic – getting physically involved

Barriers to Motivation

- Time of learning opportunity
- Life stressors
- Ease of accessing learning opportunity
- Cost of learning opportunity
- Openness of instructor

How to Help Fellow Learner

- **Self-Directed**
 - Poor at self-directed, facilitate
- **Personal Experience**
 - May create an obstacle
- **Learning Preparedness**
 - Importance of reflection
- **Learning Orientation**
 - Problem oriented
 - Needs assessment
- **Motivation**
 - Only internal so must decrease barriers

WE ARE ROLE MODELS

- In evaluating effective teaching, being a good role model was the highest rated characteristic by both faculty and students



The Hidden Curriculum

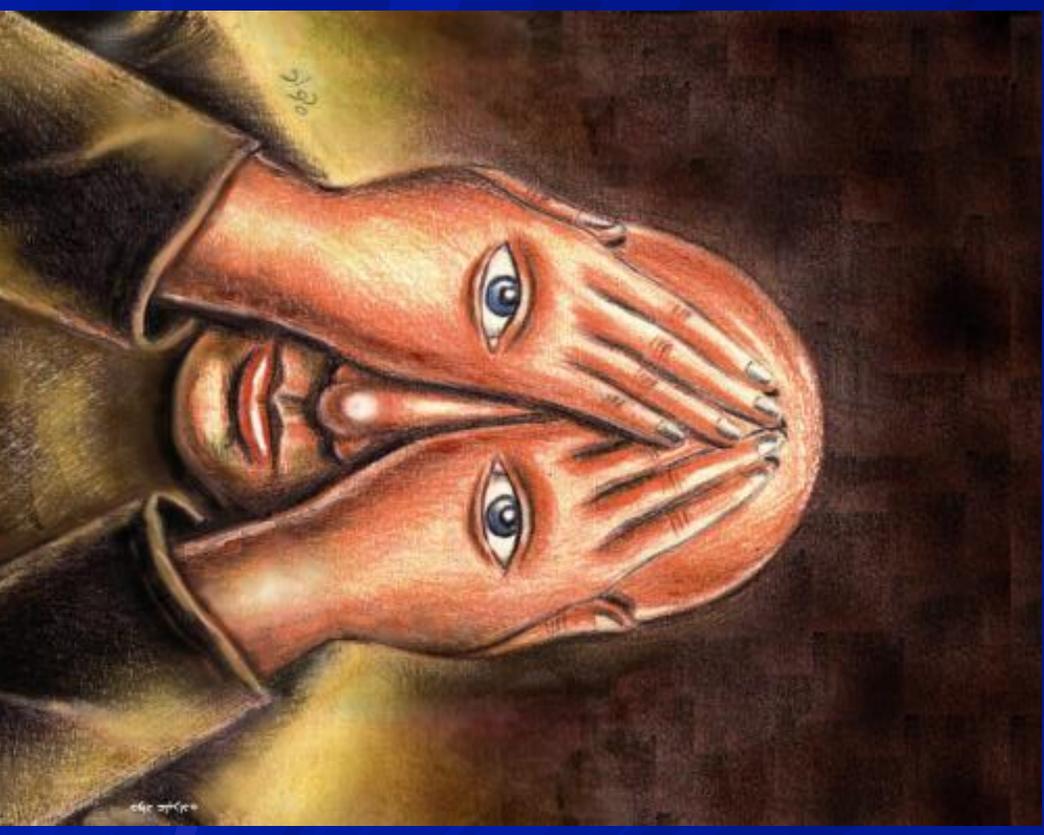
- Informal, not taught, but present
- “Given the chance to observe and practice in situ the behavior of members of a culture, people pick up relevant jargon, imitate behavior, and gradually start to act in accordance”

Situational Learning

- Learning is a function of the activity, culture, and context in which it occurs
- Social interaction is critical
- Learners become involved in a community of practice which embodies beliefs and behaviors to be acquired
- Unintentional

The Hidden Curriculum

- Taught everyday
- Product of the ambient culture
- Not a product of explicit teaching
- Taught by actions and inactions



Medical Students' Perceptions of Teaching

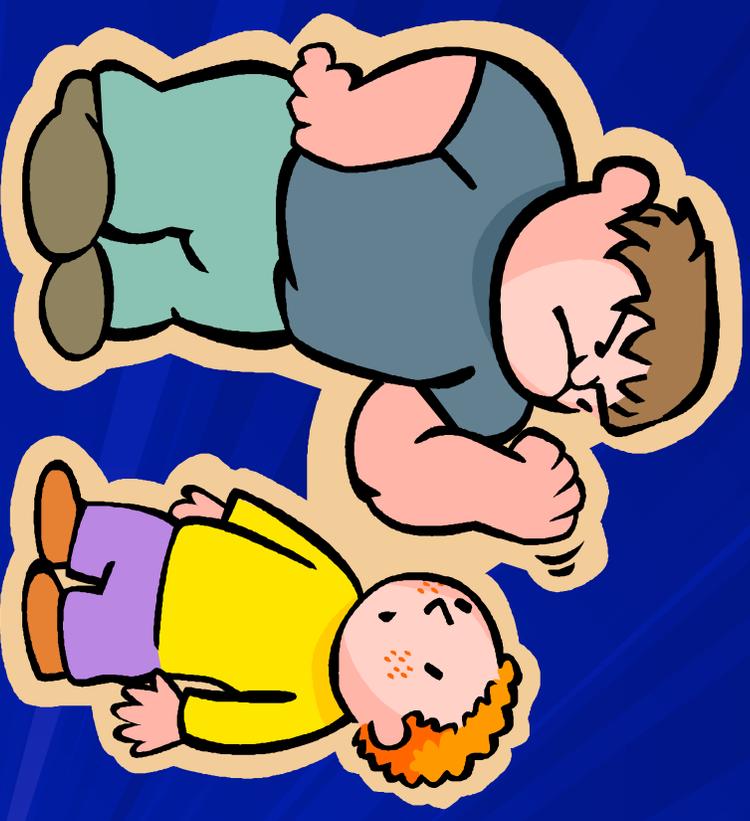
- 36 medical students interviewed
 - Able to identify positive role models
 - 2/3 humiliated by senior faculty for lack of knowledge
 - 1/2 reported competition among colleagues
 - 1/2 reported humiliation from senior residents or nurses

Studies of Hidden Curriculum

- 128 hours of interaction in operating room observed
- Dominant themes: time, safety, sterility, resources, and roles
- Generated tension
- Resident mimics tension generating response

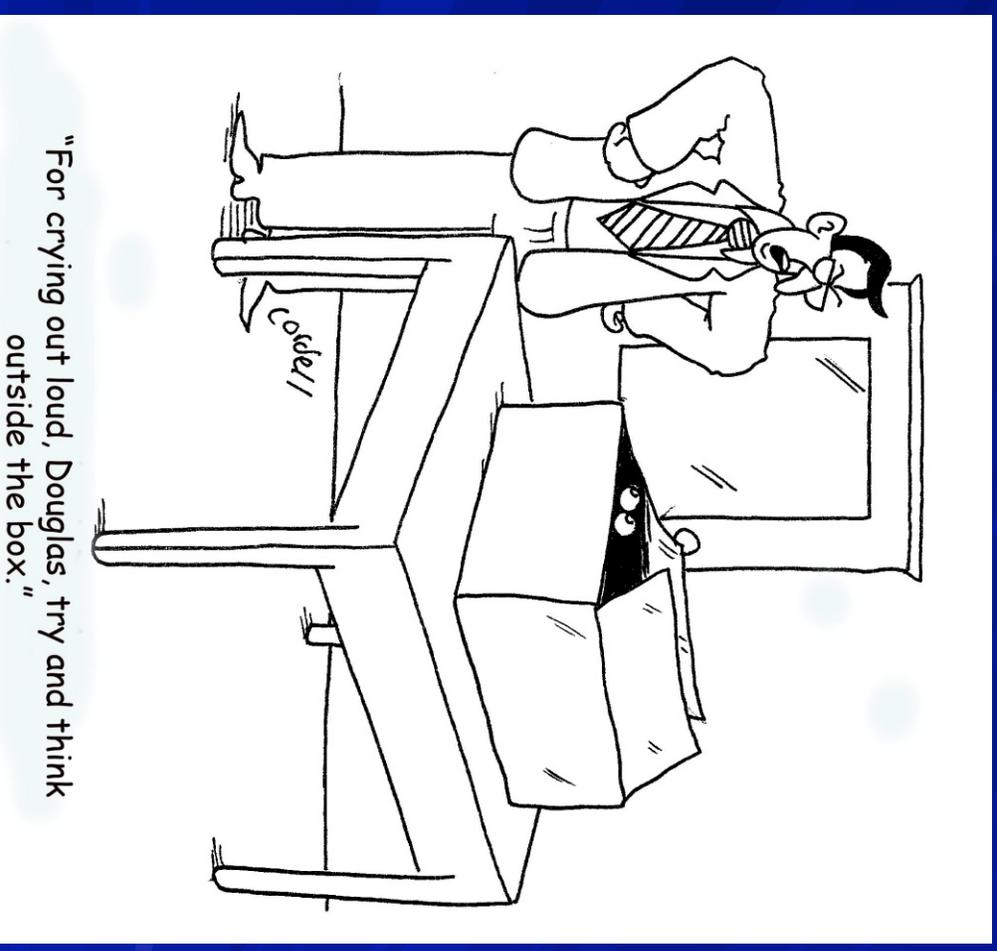
Why the Fuss?

- 2779 medical trainees surveyed
 - 18% reported bullying (senior faculty 27% of time)
 - 20% felt mentors demonstrated callousness



The Hidden Curriculum

- Implicit nature
- No stated goals
- Students need to be informed of the expected outcomes of the teaching



The Educational Conundrum

- What are fellow learners?

Are they adult learners?



Fellows Are:

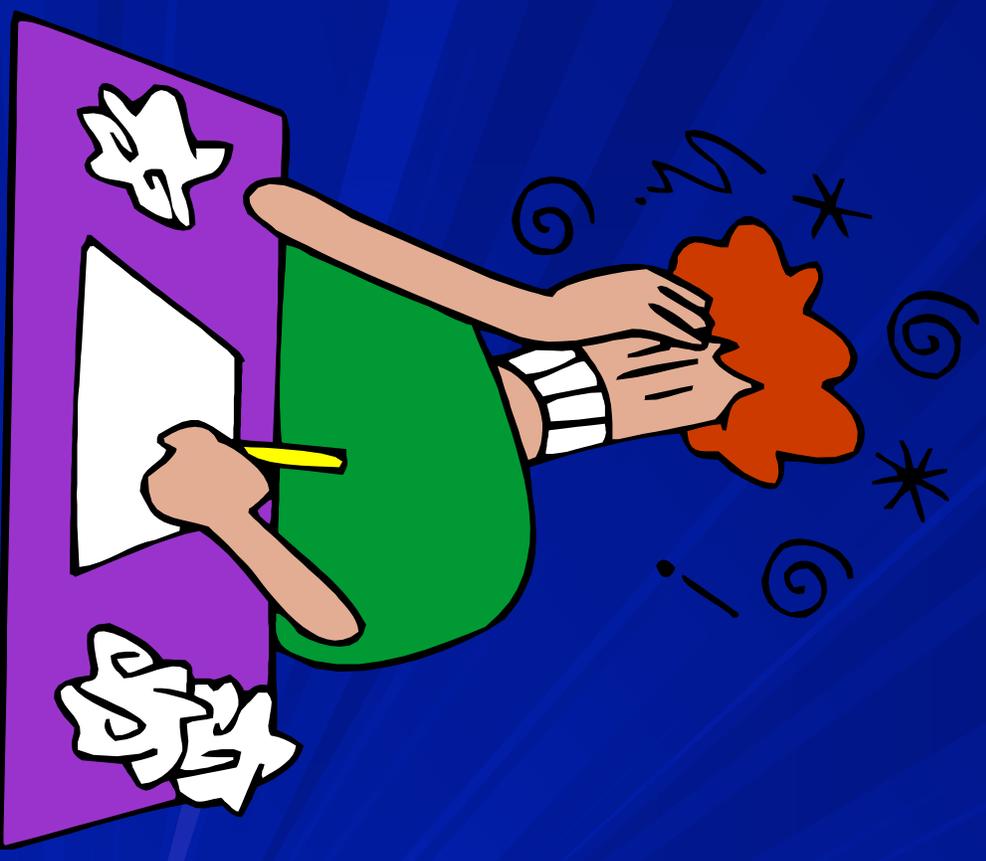
- Done With Residency
- Chose the Given Specialty
- Are Motivated to Learn
- Want to be the Best
- Have Personal Experience Upon Which to Build
- Have the Barriers of Time Removed
(reason they chose a fellowship)

Current Fellow Program

- Structured didactics
- Have exams as motivation
- Remove self-direction
- May remove motivation

Hint at The Problem

- Fellows want to be treated as adults
- Number of Programs with at Least ONE Program Director Change in 2010
 - Anesthesiology 1/10
 - Cardiothoracic 1/7
 - CCM 1/8
 - Pain 1/6
 - Pediatrics 1/8



If a Fellow Has Fulfilled the Core
Competencies from Residency

Isn't time to let them grow up?

Fellows Are Adult Learners

- Tap into that motivation
- Assist with Self-directed learning
- Emphasize the “why”
- Use personal experience to complement learning

Challenge to GME

- Fellows have completed residency
- If didn't do a fellowship, all learning would be adult
- Should they be penalized because they chose additional specialization
- Consider examining requirements to align better with adult learners

