

Defining an expert

- She had heard about him from other patients.
- The referring physician respected him.
- She thought he was knowledgeable, because he had developed several operations.
- He answered her questions in a friendly, confident manner.
- He thought about her problem and tailored the operation to her needs.

Defining an expert

- She made no comment about outcomes.
- "Respect of the referring physician" was the proxy for expertise.

Defining an expert: fellows

What will make you an expert?

- My education
- Knowing a lot
- Knowing what to do and when

Defining an expert

What do you need to do to become an expert?

- Study a lot
- Do a lot of cases
- Work with non – hovering faculty members

Defining an expert

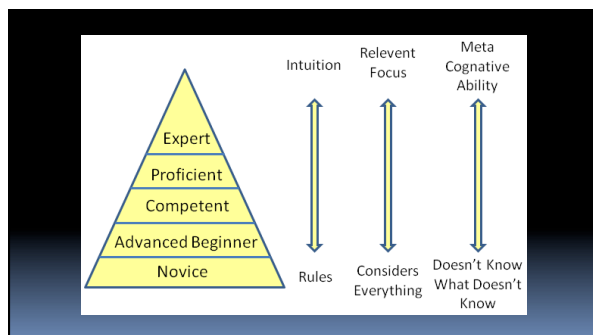
What do you need to do to become an expert? (JRZ additions)

- Study the right things a lot and discuss your new knowledge,
- Do a lot of meaningful cases that you will see in practice,
- Work with faculty members who know proper hovering techniques.

Expert in the Dreyfus model (1980)

- A Five – Stage Model of the Mental Activities Involved in Direct Skill Acquisition

Dreyfus SE, Dreyfus, HL. Operations Research Center, University of California Berkeley Feb. 1980; pp 80 (1 – 22)



Expert in the Dreyfus model (1980)

- "The performer refines whole situations to the point that unique decisions intuitively accompany situation recognition without need of conscious calculation." (p. 16)
- The expert instinctively does what must be done after seeing the problem in a holistic way.

Defining an expert

- Knowledge of basic mechanisms (Causal)
- Understands the relationships between basic mechanisms and clinical findings and connects the two (Analytical)
- Experiential knowledge to develop pattern recognition (Exemplar)

Defining an expert: There's more

- Meta cognition
- Empathy
- Communication
- Professionalism
- Coordination of the above

What tools do we have?

Milestones

- The milestones provide a framework for the assessment of the development of the resident physician in key dimensions of the elements of physician competency in a specialty or subspecialty.
- They do not represent the entirety of the dimensions of the six domains of physician competency.
- They do not tell us how to transfer knowledge.

ACGME Anesthesiology Milestones

Milestones: Levels of achievement

- Level 1: (Novice) Incoming resident
- Level 2: (Advanced Beginner) Advancing resident, but not at mid level
- Level 3: (Competent) Continues to advance, demonstrates a majority of the milestones
- Level 4: (Proficient) Substantially demonstrates the milestones targeted for residency
- Level 5: (Expert) Advanced beyond performance targets, demonstrates "aspirational" goals

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Our end product is proficiency, not expertise

- Not enough time, Not enough cases
- "Do it this way" and "My way is right"
- Practice by protocol
- Treatment is standardized
- Afraid to say "go ahead and try it"
- Institutional dogma

Milestones

- At Level 4, the resident substantially fulfills the milestones expected of an anesthesiology resident, and is ready to transition to independent practice.
- Level 4 is a graduation target, not a graduation requirement.
- Graduation is the judgment of the Program Director using information derived from the milestones and from the collective advice of the CCC.

Milestones

- Milestones are descriptors and targets for resident performance.
- Moving from Level 1 to Level 5 corresponds with moving from a novice to an expert but not from a PGY 1 to a PGY 4 level of training.
- Each resident will reach milestone – related goals at different rates.

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- Moving from Level 1 to Level 5 corresponds with moving from a novice to an expert but not from a PGY 1 to a PGY 4 level of training.
- **Each resident will reach milestone – related goals at different rates.**

How can we help fellows reach Level 4 (or higher)?

Experiential learning

- For the things we have to learn before we can do them, we learn by doing them (Aristotle)

Experiential learning

- For the things we have to learn before we can do them, we learn by doing them (Aristotle) **by working with expertly hovering faculty members who serve as facilitators (JRZ).**

Experiential learning

Not just doing the case

- Learning through reflection during and after the experience
- Steps
 - Concrete experience (**do the case**)
 - Reflective observation (**what is working and failing**)
 - Abstract conceptualization (**how can I improve next time**)
 - Active experimentation (**next attempt influenced by above**)

Experiential learning

Steps for the learner

- Be willing to be actively involved in the experience
- Be able to reflect on the experience
- Possess and use analytical skills to conceptualize the experience
- Possess decision making and problem solving skills in order to use the new ideas gained from the experience

How can we help fellows reach > Level 4?

- Base the training on a model of skill acquisition
- Address, at each stage of training, the issues involved in facilitating advancement.
- Avoid . . . intricate and sophisticated aids which, although they might improve performance at a particular level, would impede advancement to a higher stage, or even encourage regression to a lower one. . .

Dreyfus, Dreyfus 1986

Steps toward expertise

Junior Fellow	More advanced Fellow
1. Stepwise case discussion	1. Discuss case in holistic terms
2. Begin the real experience	2. Think Entrustable Professional Activities
3. Controlled experience	3. They tell you, you guide them
4. Close monitoring	4. Many, but meaningful cases
5. Unambiguous instructions	5. Mock oral examinations
6. Assure they follow the rules	6. High involvement in case discussions
7. Direct observation	7. Direct observation
8. Multiple choice exams	8. Let them try something new

How can we help fellows reach > Level 4?

- Ask the right questions
 - Did you notice...?
 - Why did that happen?
 - Does that happen in life?
 - Why does that happen?
 - How can you use that?

How can we help fellows reach > Level 4?

- Know the fellows' learning styles,
 - Verbal – Linguistic
 - Logical – Mathematical
 - Visual – Spatial
 - Auditory – Musical
 - Bodily – Kinesthetic
 - Interpersonal
 - Intrapersonal
 - Naturalistic

How can we help fellows reach > Level 4?

- Mentor each fellow as needed according to the learning style,
- Know where the fellows are starting from,
- Assess fellow's performance honestly and back up your opinions with evidence

How can we help fellows reach > Level 4?

- Provide thoughtful and timely feedback,
- Assist each fellow both with analytic thinking early and with holistic thinking later,
- Become a mentor who inspires the fellow and helps the fellow understand meta cognitive ability.

How can we help fellows reach > Level 4?

1. A faculty member who is fully engaged as a teacher/facilitator
2. Access to a variety of teaching methods that match learning styles
3. A fellow who is fully immersed in the learning process

ALL KEY FACTORS IN THE FELLOWS' TRANSFORMATION INTO CONSULTANTS

CREATING CONSULTANTS

- What is a consultant / expert?
- What tools do we have to assure that a “know it all” becomes a consultant?
- What can we do to initiate the transformation of the fellow into a consultant?

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