

Advanced Mentoring Course

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[Lesson Plan Word Doc \(click to open\)](#)

Course Outline

- What is a mentor in our context?
- Promoting an EBP philosophy
- Establishing an optimal mentoring environment
- Apply Learning Theory in your mentoring context
- Nurturing the reflective learner
- Setting and following up on goals
- Build your mentoring toolbox
- Grading the mentee
- Grading the mentor
- Putting it all together

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INTENDED LEARNING OUTCOME AND OBJECTIVES



[The roots of education are bitter, but the fruit is sweet.](#)

What is a “Mentor” in our context?

Defining “Mentor”

Various roles of a “Mentor”

Qualities of Excellent Mentors

EBP and mentoring (don’t be a dinosaur)

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INTENDED LEARNING OUTCOME AND OBJECTIVES

men·tor [*men-tawr*]

Noun: a wise and trusted counselor or teacher. An influential senior sponsor or supporter.

Verb: to act as a mentor

Synonyms: adviser, master, guide, preceptor

ABPTRFE: teacher, sponsor, counselor, host and guide, and **exemplar**



Greek: "wise advisor," Mentor was an older advisor whom Odysseus put in charge of his household and his son (Telemachus) when he left for Troy and the Trojan War, essentially fulfilling the role of advisor, friend, teacher. Mentoring is an investment in time, energy and personal-know

how. In particular, mentors share resources that are hard, painful or even dangerous to acquire through self study.

Pre-Professional vs. Post-Professional

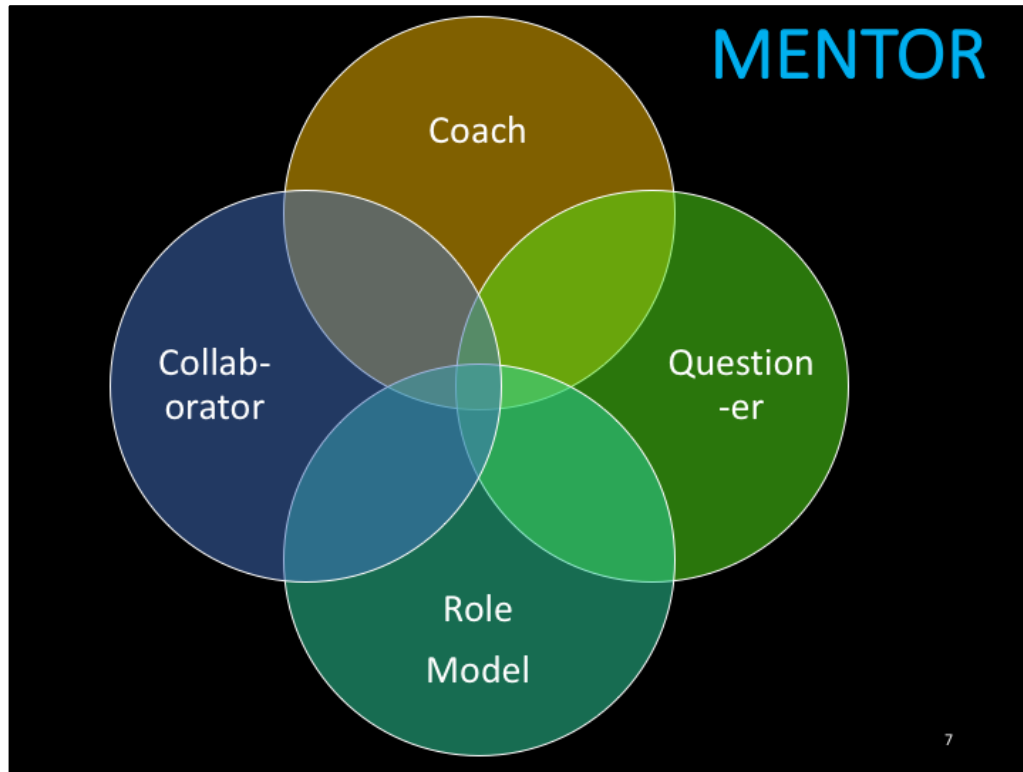
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Mentor
Facilitator
Colleague
Mentee's Patient

What's the difference?

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1. Licensed provider



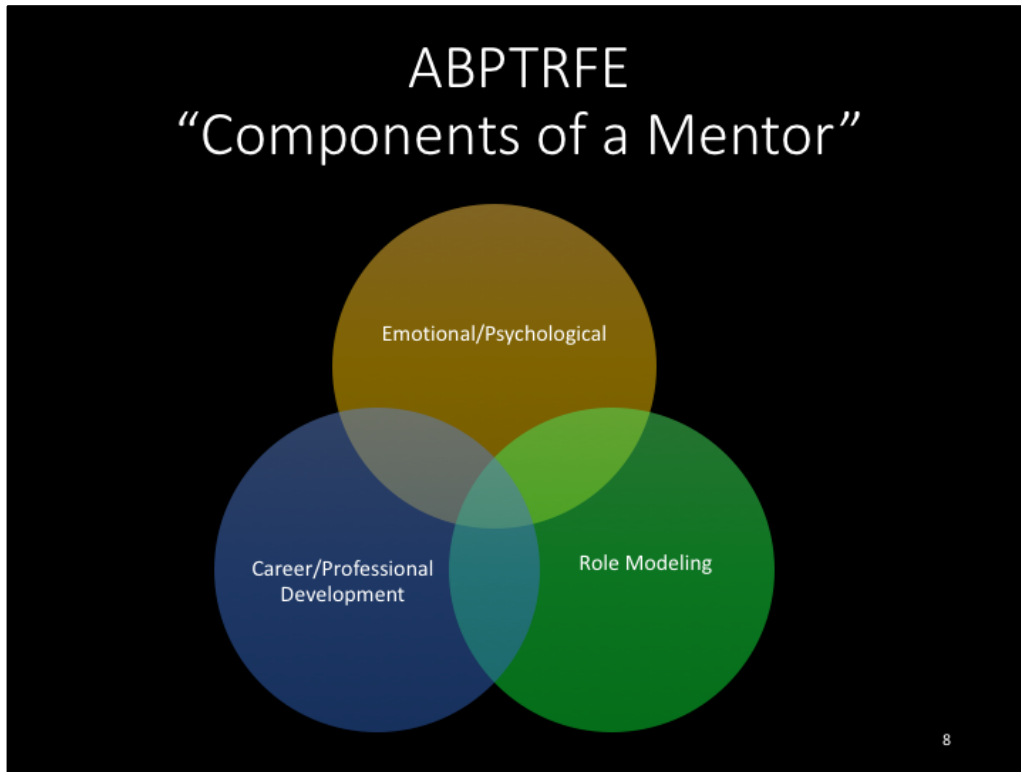
The ABPTRFE has published a mentor resource manual which you can access here:
<http://www.abptrfe.org/ForPrograms/MentoringResourceManual/>

COACH: **building** trust, conveying empathy and creating a safe psychological and physical space, protecting the mentee, providing encouragement, maintaining a positive attitude themselves.

QUESTIONER: behavioral observation of the mentee is rarely enough to understand the mentee, strategic and tactical questions are one of the more difficult and resource consuming requirements of a mentor. Getting what is in the mind of the mentee out.

ROLE MODEL: the mentor has more experience, notably in complex situations. Therefore serving as a role model (apprenticeship model) is a key component of this relationship, especially during the early stages of the relationship

COLLABORATOR: ultimately this relationship, especially a mature one, should be reciprocal (think Plato and Socrates, Freud and Jung). Both derive emotional and tangible benefits. Through **Respect** (regard their resident/fellow as a colleague and treat them fairly and appropriately; respect resident/fellow's goals, circumstances, uniqueness, ideas, contributions)



I found this interesting because the role of the mentor was not what I thought it was initially.

According to the ABPTRFE, Mentoring Consists of **three** components:

1. **emotional and psychological support**
 1. Emotional safety (calm temperament, being patient, being nonjudgmental, being easy to approach with questions or concerns)
2. direct assistance with **career and professional development**
3. **role modeling**

Other perspectives from the ABPTRFE

ACGME

- Medical Knowledge
- Patient Care/Management
- Communication
- Professionalism
- Collaboration (systems based practice)
- Practice based learning and improvement

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<http://www.acgme.org/What-We-Do/Overview>

“People seldom improve when they have no model but themselves to copy.”

Goldwin Smith

19th Century educator and historian

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Who have you copied most in your professional or personal life?
What have you copied from them? A mental checklist to reason through?
This is important in observational feedback and apprenticeship models.
(feedback and observation are two of the most powerful tools we use during clinical/bedside teaching)
We will talk more about role modeling later when we talk about the POSE apprenticeship model (preview, outline, share, evaluate)



You can be a gps, but your most important role is to serve as compass.

Your goal as a mentor is
not to be right OR liked.
Your goal is to ignite.

Kris Porter



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Education is not the filling of a pail but the lighting of a fire!

William Butler Yeats – Irish Poet

Over the course of your life you have had many experiences where mentoring techniques were applied, from teachers, coaches, supervisors, and colleagues, to name a few. Take a moment to think of one that was very **positive** and why it was positive. Select one that was negative, and why it was negative.

Think, Pair, Share

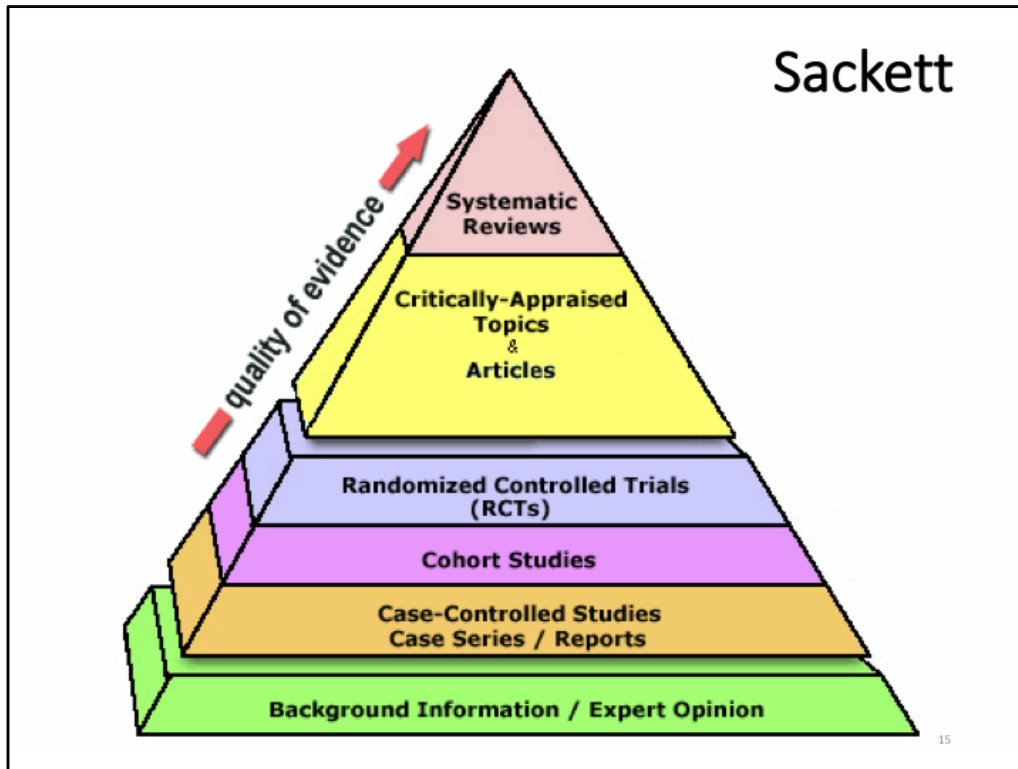
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WE WILL DO THIS IN THE LEARNING ENVIRONMENT SESSION

Promoting a realistic “EBP” Philosophy

Mentoring Section

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What level is missing at the bottom? (basic science research) What is missing at the top? (meta analysis)

What is the strength and weakness of the top and bottom?

“...If we only did applied research, we would still be making better spears.”

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EBP does not necessarily mean we only use gold standard research in our practice, in 2018 that's unrealizable.

When on the cutting edge, we sometimes must TRANSLATE early basic science research to practice (e.g. regenerative medicine, dry needling, orthotics). That is much easier for seasoned clinicians, and serves as a great opportunity for mentors to help learners integrate controversial/emerging knowledge into their practice.

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Advancing Excellence in Health Care

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Translating Research Into Practice (TRIP)-II Publication # 01-P017

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Fact Sheet

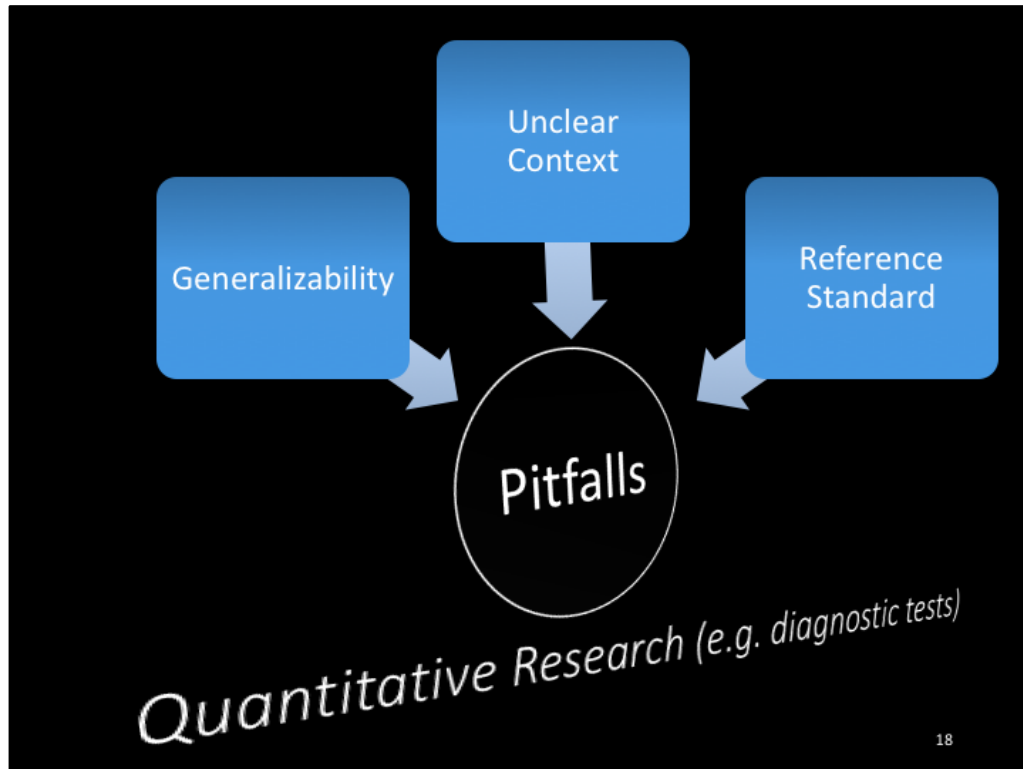
Translation of research findings into sustainable improvements in clinical outcomes and patient outcomes remains a substantial obstacle to improving the quality of care. Up to two decades may pass before the findings of original research becomes part of routine clinical practice. Translating Research Into Practice-II is an initiative that focuses on implementation techniques and factors associated with successfully translating research findings into diverse applied settings.

In September 2000, the Agency for Healthcare Research and Quality (AHRQ) funded 13 new projects to evaluate different strategies for translating research findings into clinical practice. The aim of these 3-year cooperative agreements is to identify sustainable and reproducible strategies to:

- Help accelerate the impact of health services research on direct patient care.
- Improve the outcomes, quality, effectiveness, efficiency, and/or cost effectiveness of care through partnerships between health care organizations and researchers.

The new projects join 14 others funded in 1999 as part of a major initiative by AHRQ to close the gap between knowledge and practice—between what we know and what we do—to ensure continuing improvements in the quality of the Nation's health care.

<http://www.ahrq.gov/research/findings/factsheets/translating/tripfac/index.html>



SI research is so poor, is mainly because there is no good reference standard. It's not because of a lack of brilliant and talented researchers attempting to find simplicity from this complexity

Must understand it's purpose, it may guide/help monitor intervention outcomes better than diagnose injury (e.g. SI joint stress test, phalen's test, etc)

Generalizability

Diagnostic tests cannot simply be deemed good or bad. The same test may provide important information for certain patients under certain conditions, but not for others. For example, testing vibration perception is useful for diagnosing a lack of protective sensation and an increased risk of ulceration in the feet of patients with diabetes.²⁹ However, vibration perception deficits are of more limited diagnostic value in the examination of a patient suspected of having lumbar spinal stenosis.

Unclear Context

For example, the KT-1000 knee arthrometer* possesses a high degree of diagnostic accuracy for distinguishing between individuals with and without ACL deficiency,^{57,58} but it has not been shown to be useful for assisting in the selection of an intervention (surgical versus nonsurgical).

Reference Standard (Gold Standard)

Reference standard for SIJ provocation is often injection. However, there is leakage and you must consider all structures that the leakage could leak too (i.e. epidural

space)

Sensitivity and Specificity

- Pre-Test Probability
- Sp-in
- Sn-out
- Likelihood Ratios

Helping your learner integrate EBP/stats into practice

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Review this, you will be quizzed on it!

Kris's Lachman's Test example

- The best psychometrics possible
- I have seen 3 false negatives in last 3 months in my clinic
- I don't think it's because the clinicians were incompetent

Ambiguity

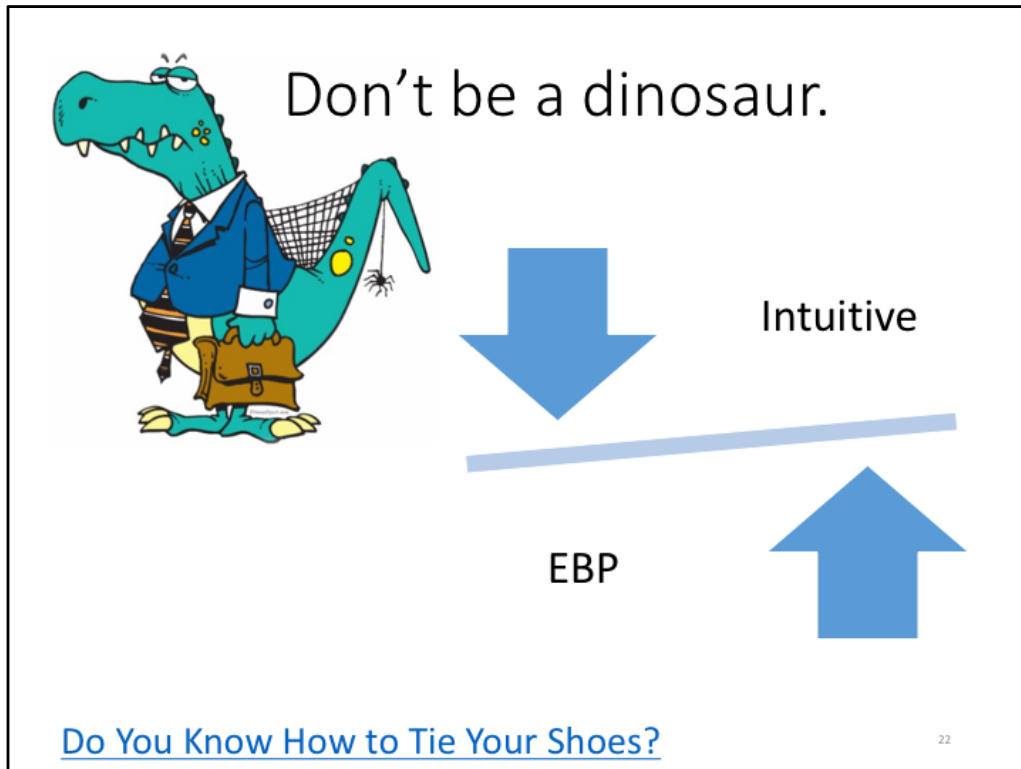
“Whether a physician is defining a disease, making a diagnosis, selecting a procedure observing outcomes, assessing probabilities assigning preferences or putting it all together, he (she) is walking on very slippery terrain.”

- It becomes difficult for the student to accept that error-free measurement is an unrealizable ideal. Students' comfort with the ambiguity and uncertainty of the clinical world should be facilitated.

1. Delitto a, Snyder-Mackler L. The diagnostic process: examples in orthopedic physical therapy. *Physical therapy*. 1995;75(3):203-11. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/7661931>.

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To be convinced that living with error is the rule in the clinical environment, the physical therapy student need only look to other clinical disciplines



You can't be an expert in everything! You can't remember everything. Mirror the attitude/behavior you want the mentee to use. Are you open to adjusting your bias?

Are you going to enough professional development that puts you outside your comfort zone and challenges your existing thought process?

VIDEO: http://www.ted.com/talks/terry_moore_how_to_tie_your_shoes (No matter how old you are, you can usually benefit from going back to the basics and doing something a little bit differently)

From: Systematic Review: The Relationship between Clinical Experience and Quality of Health Care

Ann Intern Med. 2005;142(4):260-273. doi:10.7326/0003-4819-142-4-200502150-00008

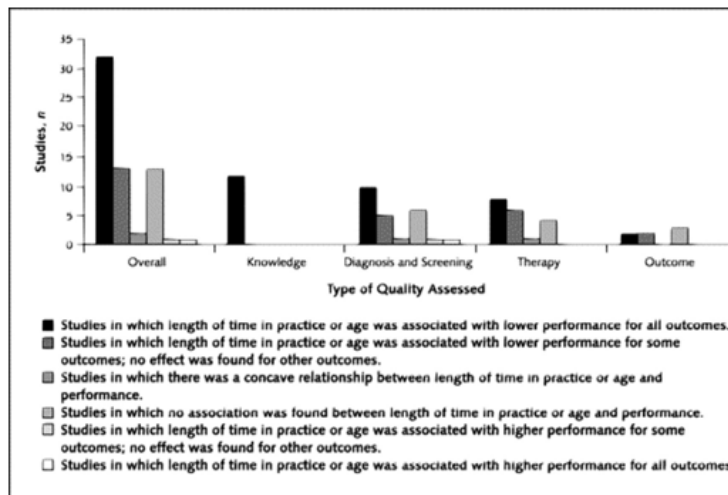


Figure Legend:
Distribution of study results relating physician age to clinical performance in various domains.

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LINK TO ARTICLE: <http://annals.org/article.aspx?articleid=718215>

There are many limitations to this article, proceed with caution

As a qualitative researcher by training, I am quite familiar with the concept of equifinality --- the idea that the same destination can be reached through various routes. That said, some routes are more efficient than others, and some routes can lead to a false sense of mastery. **So while it is true that advanced certifications in the hands of an inexperienced clinician with poor clinical reasoning is a cause for concern, of equal concern is the "experienced" clinician with a single year of experience many years over, no effort toward advanced clinical skills or evidence-informed decision making.**

It is also true, and rarely discussed, that the reverse is also true. The years of experience and pattern recognition of clinical mentors can be cultured within a single year of post-graduate clinical residency or fellowship, and the differential medical diagnostics and understanding of imaging studies can certainly be obtained via experiential and continuing education venues other than the t-DPT (although I would argue no more complete and cost effective; experienced clinicians typically are not going that route either). The point is that none are osmotic, and all require some sort of self-reflection and academic effort on the part of the professional somewhat beyond that of simply passing the basic PT licensing exam.

Mastery is assessed patient by patient and not en masse. Clinical skill and lack thereof is not patting oneself on the back on the basis of the patients helped, but by self-reflection vis-a-vis the aforementioned domains through the eyes of patients with whom the clinician has failed.

Let us strive for the day as a profession when we focus less on differences in not HOW mastery in expert practice domains is achieved for each individual clinician, and rather THAT they are achieved. The current state of our professional debate on experience versus knowledge base suggests that we as a profession are content to ask our patients to choose between the two [DPT vs. non-DPT]. Clinicians that do simply are not as good as they think, and the public deserves a profession that provides them consistent mastery of each domain, in every practicing therapist.

Overview

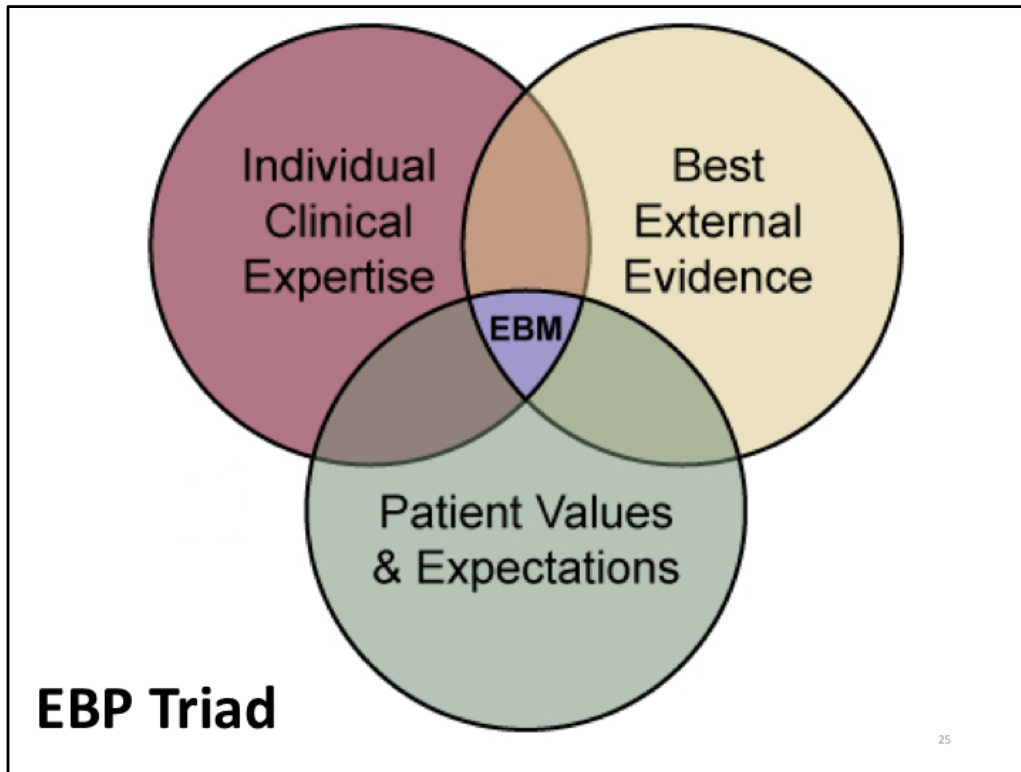
While “practice makes perfect” in some situations, physicians' knowledge and performance may decline with the passage of time.

Evidence

Of 62 published studies that measured physician knowledge or quality of care and described time since medical school graduation or age, more than half suggested that physician performance declined over time for all outcomes measured. Only 1 study showed improved performance for all outcomes measured.

Implications

This review should provoke careful study of the relationship of physician experience and the quality of care. It also raises concerns about the adequacy of continuing professional education in medicine.



EBP Triad

2010, Posley K., Stanford Medical Group. Adapted from Sackett.

Find your balance, and help your mentees find theirs. They will not be the same.

Qualitative Research

- investigates human phenomena that do not lend themselves, by their very nature, to quantitative methods.
- Laced with personal biases and values
- People talking about their meanings, observing actions

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Many more research qualitative vs. quantitative designs (historical, ethnographic-culture)

Keep interviewing until you don't learn anything new. Sample size and power are less relevant.

Research Report

Expert Practice in Physical Therapy

Background and Purpose. The purpose of this qualitative study was to identify the dimensions of clinical expertise in physical therapy practice across 4 clinical specialty areas: geriatrics, neurology, orthopedics, and pediatrics. **Subjects.** Subjects were 12 peer-designated expert physical therapists nominated by the leaders of the American Physical Therapy Association sections for geriatrics, neurology, orthopedics, and pediatrics. **Methods.** Guided by a grounded theory approach, a multiple case study research design was used, with each of the 4 investigators studying 3 therapists working in one clinical area. Data were obtained through nonparticipant observation, interviews, review of documents, and analysis of structured tasks. Videotapes made during selected therapist-patient treatment sessions were used as a stimulus for the expert therapist interviews. Data were transcribed, coded, and analyzed through the development of 12 case reports and 4 composite case studies, one for each specialty area. **Results.** A

JENSEN et.al (2000) **Expert Practice in Physical Therapy (related to path to mastery)**

Data were obtained through nonparticipant observation, interviews, review of documents, and analysis of structured tasks.

Patients are a powerful, central, valued source of clinical knowledge and this source (the patient) was a critical focus in the assessment process. Therapists focused on the patient first as a person. For example, what valued activities or goals did the patient have, and how did movement problems interfere with those activities? What kind of support did the patient have at home and work? Patient or family data were selectively gathered and specific to the case.

Using Clinical Outcomes to Explore the Theory of Expert Practice in Physical Therapy

Background and Purpose. Theoretical models of physical therapist expertise have been developed through research on physical therapists sampled solely on the basis of years of experience or reputation. Expert clinicians, selected on the basis of their patients' outcomes, have not been previously studied, nor have the patient outcomes of peer-nominated experts been analyzed. The purpose of our study was to describe characteristics of therapists who were classified as expert or average therapists based on the outcomes of their patients. **Subjects.** Subjects were 6 therapists classified as expert and 6 therapists classified as average through retrospective analysis of an outcomes database. **Methods.** The study was guided by grounded theory method, using a multiple case study design. Analysis integrated data from quantitative and qualitative sources and developed a grounded theory. **Results.** All

Study

Lumbar patients, selected based on outcomes (>90th percentile) and average (45th-55th percentiles) using FOTO and 12 clinicians from a clinic about the size of TJC., interviewed/CV and resume

Lit review

They reported that experienced therapists spent more time with patients than did novice therapists in providing **hands-on care, seeking information, and evaluating and educating the patient.** Experienced therapists appeared able to **handle interruptions** of direct intervention more efficiently than did novice therapists. The experienced therapists also spent more time in **social interchange with patients,** and with patient **education,** than did the novice therapists. They also found that master clinicians individualized their evaluation and teaching for each patient, were more **responsive in their therapeutic interaction** with patients, and **integrated more verbal encouragement and tactile cues** with intervention than did the novice clinicians.

Themes from study

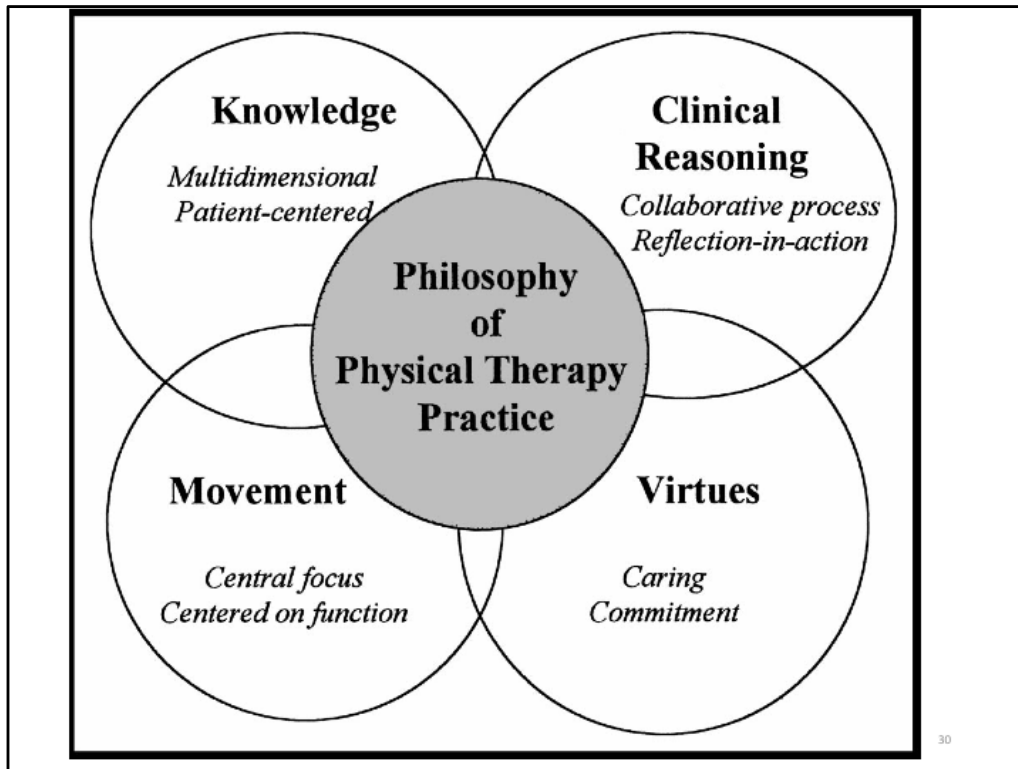
- **Patient centered** in every way (see previous diagram)
- foundation for the expert clinician's approach to care is an ethic of caring and a respect for individuality

- carefully regulated their delegation of care to support personnel
- The “average” performers did not speak with the conviction or knowledge of self-efficacy issues that were demonstrated by the clinicians classified as expert.
- Experts had extensive prior knowledge in related fields
- Collaborative relationship with other colleagues - on the fly
- Valuing staying up on research (not just spending money or time in con-ed)
- Observing movement – notably with focus on patient specific movement patterns
- Love what they do, love helping people – regardless of the patient population
- Intellectual humility
- Inquisitiveness
- In addition, they tended to work in teams, with only a single support person. This enabled the participants classified as expert to control the episode of care and may have provided greater continuity of care to the patient.

Table 1.
Professional Profiles of Therapists Classified as Expert*

Clinician	Age (y)	Years of Clinical Experience	Education	Advanced Certification	Practice Settings	Professional Membership
Liz	59	39.0	BS PT/OT	McKenzie diploma	Spine specialist Outpatient Home care Pediatrics Mental health	APTA
Pam	44	21.0	BS in PT	Certified Manual Therapist 2001	Acute care Outpatient	No
Kathy	45	13.5	MS PT BS in biology/psychology	No	Outpatient Acute care Geriatrics	APTA
Sarah	31	2.5	BS PT BS ATC/health education	No	Outpatient	APTA NATA
James	32	4.5	MS PT BS in exercise science	No	Acute care Outpatient	No
Dawn	32	6.0	MS PT BS in exercise science/ physiology	No	Outpatient	No

*Pseudonyms are used instead of clinicians' actual names. ATC=Certified Athletic Trainer, BS=bachelor of science, MS=master of science, PT=physical therapy, OT=occupational therapy, APTA=American Physical Therapy Association, NATA=National Athletic Trainers Association.



The **patient** is the common theme in the diagram.

VIRTUES

character traits and personal attributes, set high standards for themselves, driven to **stay current** in their specialty area. They were continually intrigued by the challenges of clinical practice and strongly committed to doing what was best for the patient. In addition, these therapists did not judge difficult patients or label them as a “**noncompliant or malingering,**” but instead assumed responsibility for trying to solve what they called “**complex clinical cases.**”

CLINICAL REASONING

include reasoning related to decisions about how to interact with patients, how to **understand the patient’s experience** or perspective on his condition, how to achieve **collaboration with patients**, how to **teach and facilitate learning in patients**, how to **determine a prognosis**, and how to act when faced with ethical dilemmas. maintaining an intense, focused interaction with patients; and building **their questions on the patient’s responses**. A central focus of the patient interview for the experts was to have the **patient tell his or her story** rather than having the therapists initiate a series of questions to which the patient must respond. Experts confirmed this in their interviews.

KNOWLEDGE AND SKILL

with the intuitive ability to vary **examination and treatment based on reflection** and interaction to achieve a successful outcome for an individual patient is key for expert

practice. One of the **most important sources of their knowledge was their patients.** Listening to patients was an essential evaluative skill. Our videotapes of experts practicing demonstrated consistent **active listening skills** [body language]

MOVEMENT

patients were treated with the therapists' hands and instructed in **exercise programs that were usually few in number, simple, and specific to functional movement.** Part of the (physical therapy) **diagnosis is done with exercise.** Exercise helps me decide what is wrong with the patient. **When I am not really clear, I give them one thing to do at home, and then I will get more information. I tell them they learn and I will learn from this exercise.**

DO NOT GO OVER IN COURSE

Sample questions asked as expert clinician and researcher are viewing videotape:

Tell me what you were thinking about as you completed your evaluation of the patient? What is your diagnosis? What evidence did you use? How do you know what information to focus on? Where did you learn that? Where will you go next?

Tell me what is going on with this patient. What is your prognosis? How did you reach that conclusion? What evidence did you use? How did you know to use that evidence and where did you learn that?

Tell me about your most difficult problem with this patient. How did you identify the problem? What evidence did you use? What was your strategy for solving the problem? How did you learn to do this?

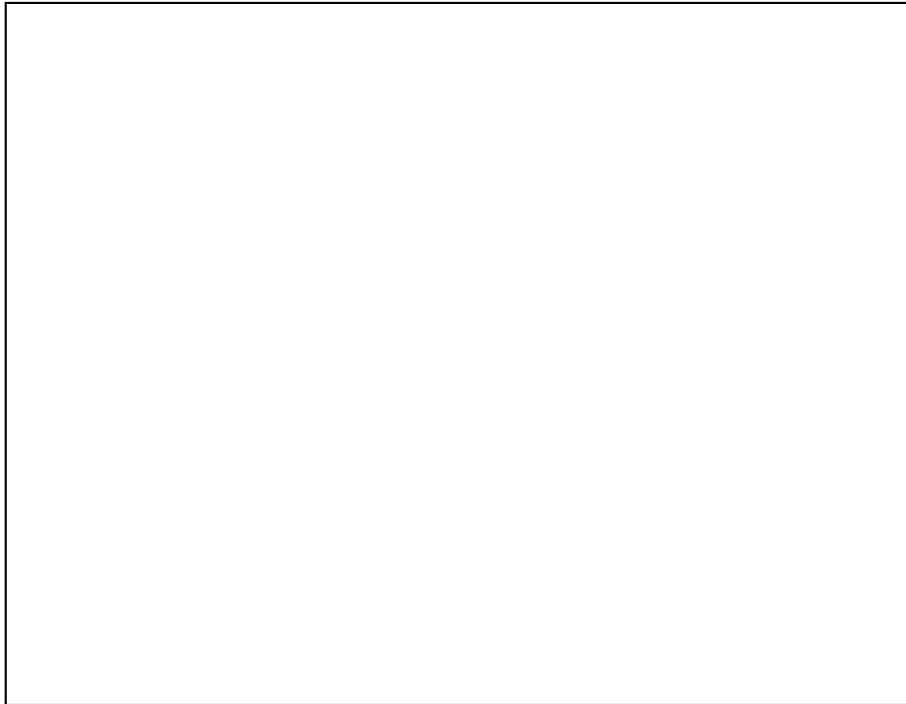
Tell me how you go about making clinical decisions with this patient? What is your approach? Describe an example as we go through the videotape. Is this process of making a decision different for you now compared with when you were a novice clinician? What are the differences?

What do you think your best patient care skills are? What knowledge do you draw on as you execute these skills? (Look at videotape for specific examples.)

How do you know you have been effective in your evaluation and treatment of this patient?

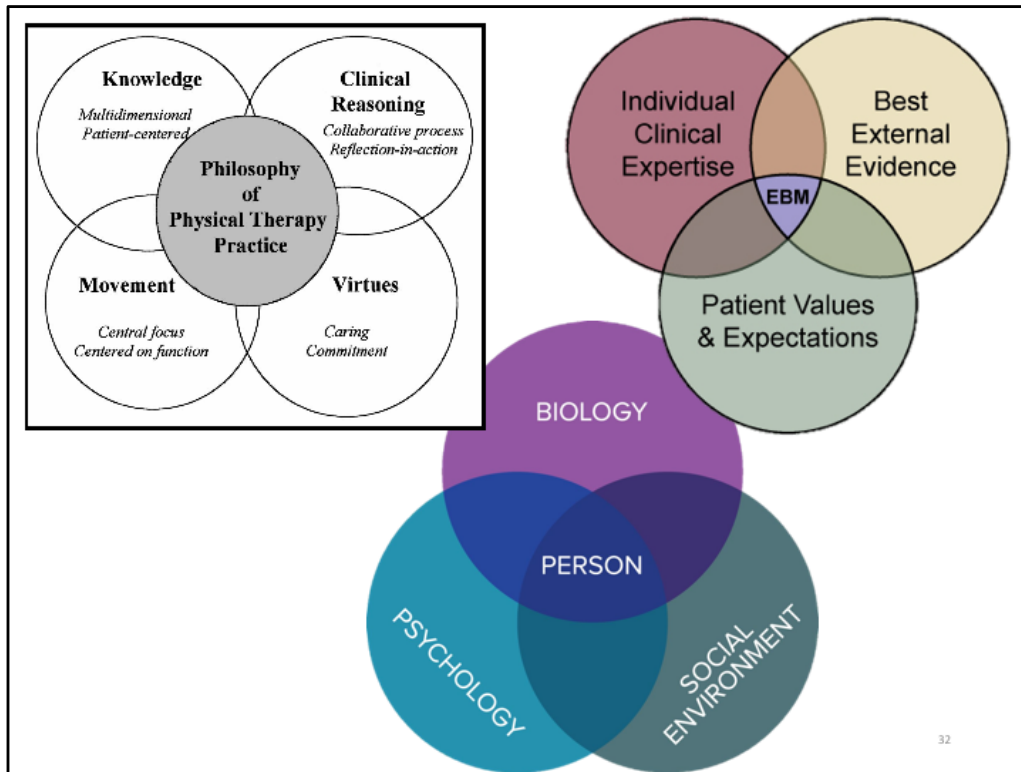
What would you tell a student about how to go about decision making in this patient care environment? Would what you tell a student differ from what you actually do?

How would it be different and why?



The biopsychosocial model. Related to the EBP triad.

Patient centeredness is not necessarily easy. Which ones come most natural to us?



Where is the overlap in these frameworks?
 Where does your mentoring tend to live?

Learning Environment

Properly orienting your learner

Psychological Safety & Building Entrustment

Emotions vs. Cognitions

Our “Community of Learning & Practice”

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INTENDED LEARNING OUTCOME AND OBJECTIVES

Orientation

- **Orient mentee:**
 - Physical space issues
 - Clear start/end times
 - Feedback systems (verbal, written, time)
- **Orient the mentor:**
 - Get to know the mentee
- **Orient patient:**
 - Be up front with patient
 - This is a value add for the patient
 - Opportunity to share our company's culture

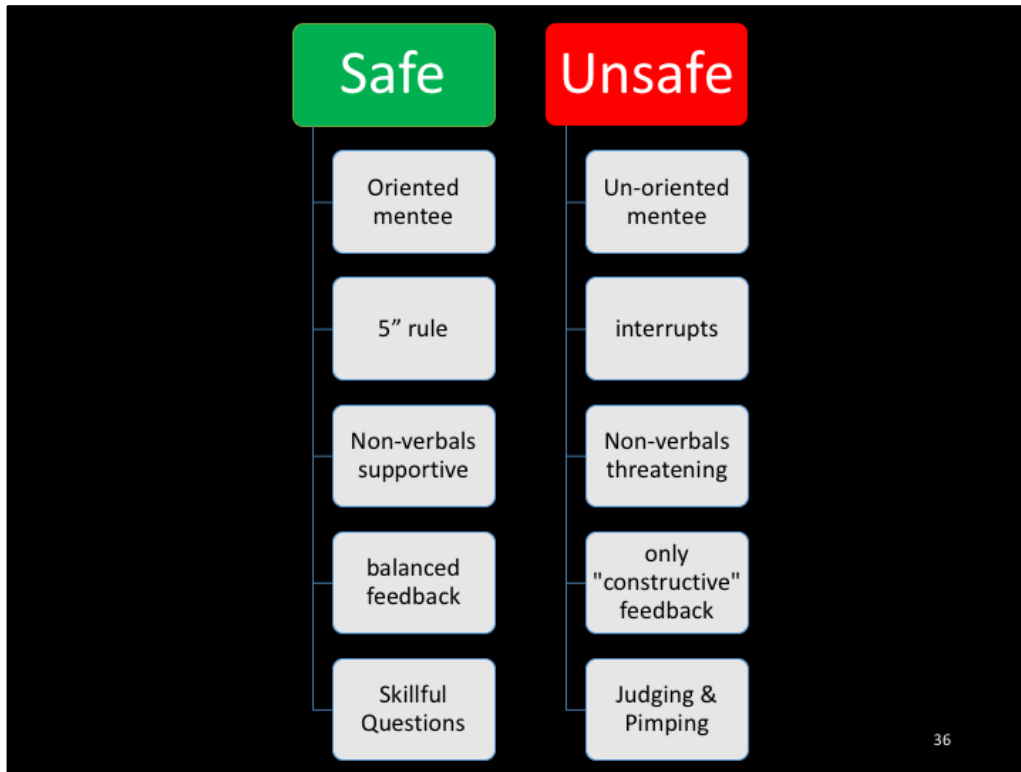
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A good orientation is one of the easiest things you can do to improve learning. Simply helping everyone to understand the realities and myths of what is about to take place.

New hire, new student, resident, fellow

Psychological Safety

- Orientation
- Look/Listen for Emotions as much as Cognition
- Priming & Leveling
 - **Prime** the mentees through small talk and also exploring their strengths
 - **Level** the hierarchy by talking about your weaknesses
- Styles of Learning and Teaching
 - Ask their preferred style
 - Most importantly, explore successful and unsuccessful mentoring/teaching experiences
 - Discuss your mentoring style & ignite!
- Use Skillfull Questions & Feedback
 - More on this to come



Much more on this in the Feedback & Goal

Repeatedly interrupting ...need "wait time"

Impersonal eye contact

 breaking eye contact

 alienating body position (turning away)

Rapid fire series of lower level questions & Use of judger questions

Emotions vs. Cognitions

- Mentor where they are, not where you are!
- If they are emotional, focus on this before the cognitive

Judger Questions

Unsafe

- What made you think that? Do that?
- That ship as sailed...too late now.
- I wouldn't have done it that way.
- Didn't we go over this before?
- What don't you understand?
- That's quackery...show me the research/psychometrics.



First starts with psychological safety. Next, the mentor must establish rapport and an ability to stimulate curiosity (ignite) in the mentee. Remember, they hired YOU.



Where are you on this spectrum with your learners? How long is your leash?
Anytime a learner is given the answer, how does that affect their deeper learning?
How about entrustment of the gym staff in the TJC context?
Entrustment may matter more for learners in different stages, less in early stages and more in later stages.
Do we let poor or excellent communication skills from learners falsely affect how much entrustment we give?
If a learner asks lots or few questions, does this affect how much entrustment we give?
Micromanaging the details shifts you to the left.
The more confident the faculty member, the easier it is to share the patient.

Entrustment #1 – Bedside Teaching



Medical resident felt entrustment was violated by fellow and attending taking over case for a girl presenting with a non-emergent case of anaphylaxis which resident had under control.

- Relegated resident to a scribe
- Confusing for family

Entrustment #2 – Bedside Teaching

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Medical resident having to take charge on a very challenging life/death case.

- Verbalization of thought process in high pressure situation (requires entrustment)
- Allowing mentee to maintain momentum and ownership of patient
- Selective mentoring (put a “C” collar on) done in private to maintain entrustment

Entrustment #3 – “Bedside teaching”

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Medical resident was empowered indirectly by the mentor during a “code”.

- Illusion of leadership: Skilled mentoring, “let me know how I can help. Do you want me to help with....” How can you create the “illusion” that the learner is in charge in our environment?
- As a mentor, don’t be too hard on yourself. Finding the right level of entrustment is not easy. Always debrief and don’t be afraid to say you were wrong!
- Careful with letting the learner lead, then punishing them for it

Bedside Teaching

- Maintain resident/patient trust
- Ensure focus is on patient, and not just resident
- Teach the resident through teaching the patient
- Have resident "think aloud" by hyper-communicating with the patient. I am doing "this" because of "this"
- Safe words/signals
- Carefully consider the "point of no return"

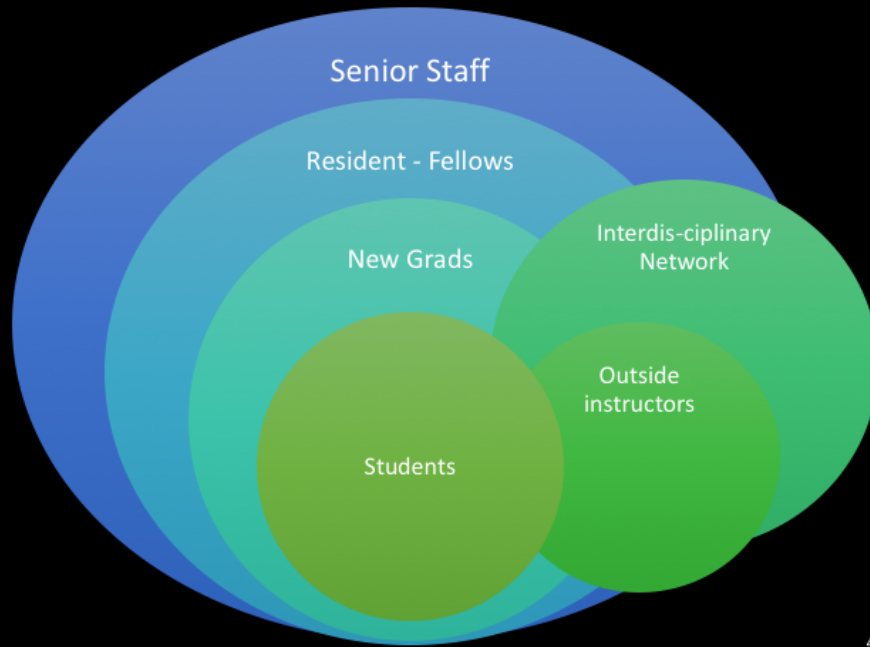


Over the course of your life you have had many experiences where mentoring techniques were applied, from teachers, coaches, supervisors, and colleagues, to name a few. Take a moment to think of one that was very **positive** and why it was positive. Select one that was negative, and why it was negative.

Think, Pair, Share

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Community of Learning & Practice



Mentors both formal and informal
Trainees both formal and informal

TJC's Community of Learning & Practice

"Our Social Network"

- FORMAL < > INFORMAL
- WITHIN TJC < > OUTSIDE TJC
- LOCAL < > REGIONAL < > GLOBAL
- INSIDE PROFESSION < > OUTSIDE PROFESSION
- EXPLICIT CURRICULUM < > HIDDEN CURRICULUM
- MANDATORY < > VOLUNTEER
- PASSIVE < > ACTIVE
- 1 ON 1 < > GROUP
- ONLINE < > IN PERSON

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EXAMPLES OF OUR COMMUNITY OF PRACTICE

1 on 1: Mentoring

Water Cooler chat (informal mentoring)

Building intra-disciplinary and inter-disciplinary network

Observation (hidden curriculum)

Community/Project Involvement (e.g. volunteering)

Didactic Course attendance

lab partner selection important

teaching assistants

Discussion boards

Psychomotor skills checks

Collaborative test taking for APTA exams

Exam reviews

OCS prep

Physician shadowing

Conference attendance

Grand rounds

Environments to apply

- Student (part-time and full-time)
- In-clinic Leadership
 - Inservices
- Bootcamp
- Resident
- Fellow
- Course Instructor
- Project Africa
- Adjunct Faculty
- Patients

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Many mentoring/teaching opportunities in JC

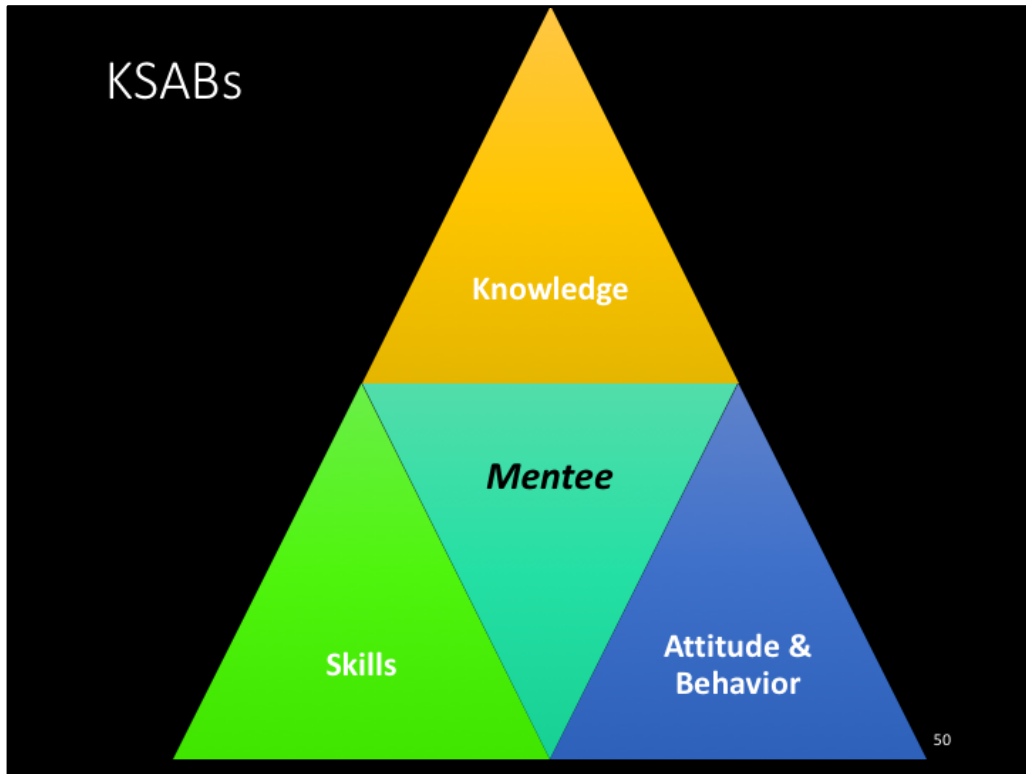
Community of Learning



- Be aware of the hidden curriculum
 - Your attitudes and behaviors
- Be aware of their formal curriculum
 - Curricular format and content
 - Administrative responsibilities
- How do you work with your mentoring community?
- How do you work WITH your teaching community?
- Do you deeply understand the clinical environment they live and work in?
- Do you facilitate social learning with their peers?

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Process of learning is powerful in a community (it takes a village)



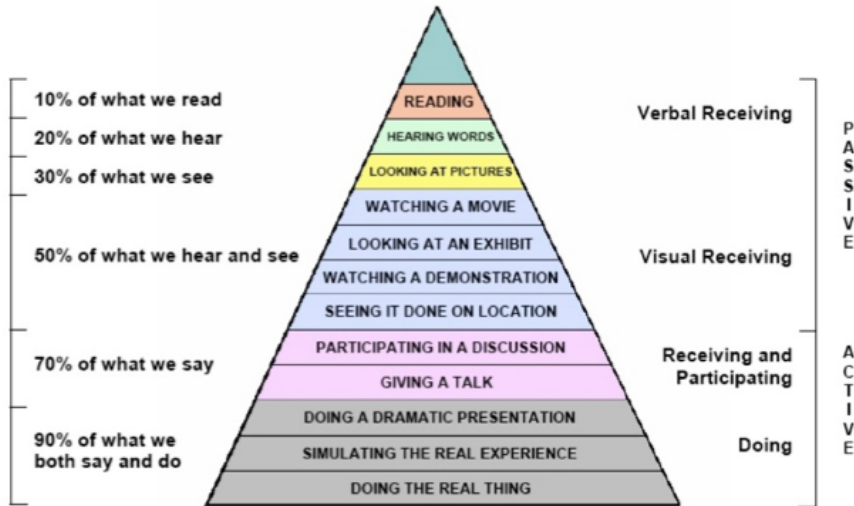
Focuses on **achievement** or acquisition of [knowledge, skills and attitudes – KSA's].

Learning should be applied to all KSABs.

CONE OF LEARNING

WE TEND TO REMEMBER OUR LEVEL OF INVOLVEMENT

(developed and revised by Bruce Hyland from material by Edgar Dale)



Edgar Dale, *Audio-Visual Methods in Teaching* (3rd Edition), Holt, Rinehart, and Winston (1969).

Learning Styles

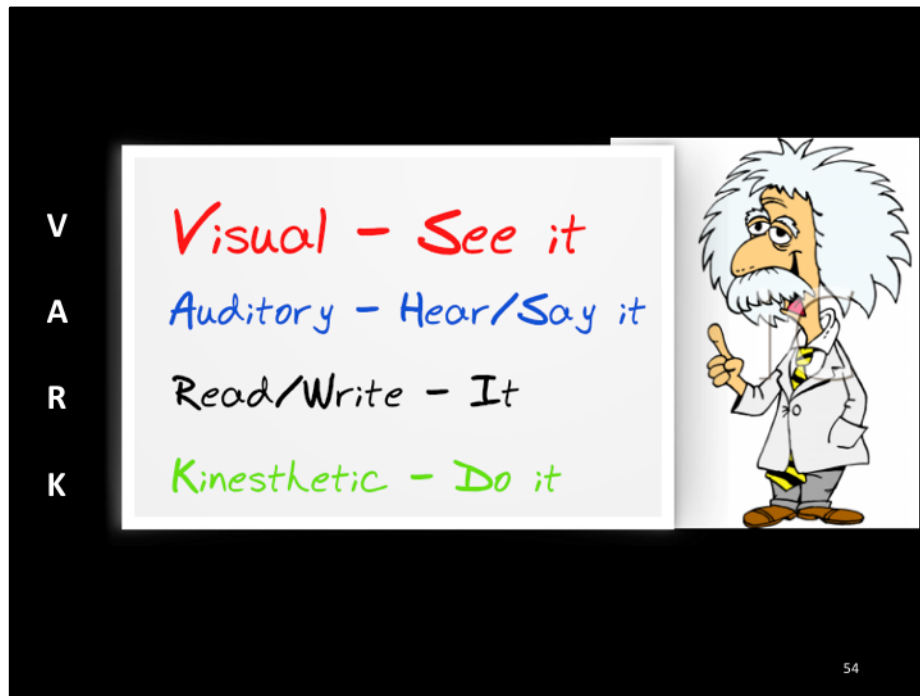
- Dependent on situation
- Pronounced with new material
- Other learning styles can be facilitated
- Learning styles often change over time

Where do our mentee's KSAB's come from?

- Personal Experience
- Life Experience
- Clinical Experience



Tree of knowledge: we stand on the shoulders of those before us.



It's simply a predilection, and it's very contextual. It is dependent on:

Dependent on situation

Pronounced with new material

Other learning styles can be facilitated to enhance learning

Learning styles often change over time

V: Like to go to youtube first, watch someone else?

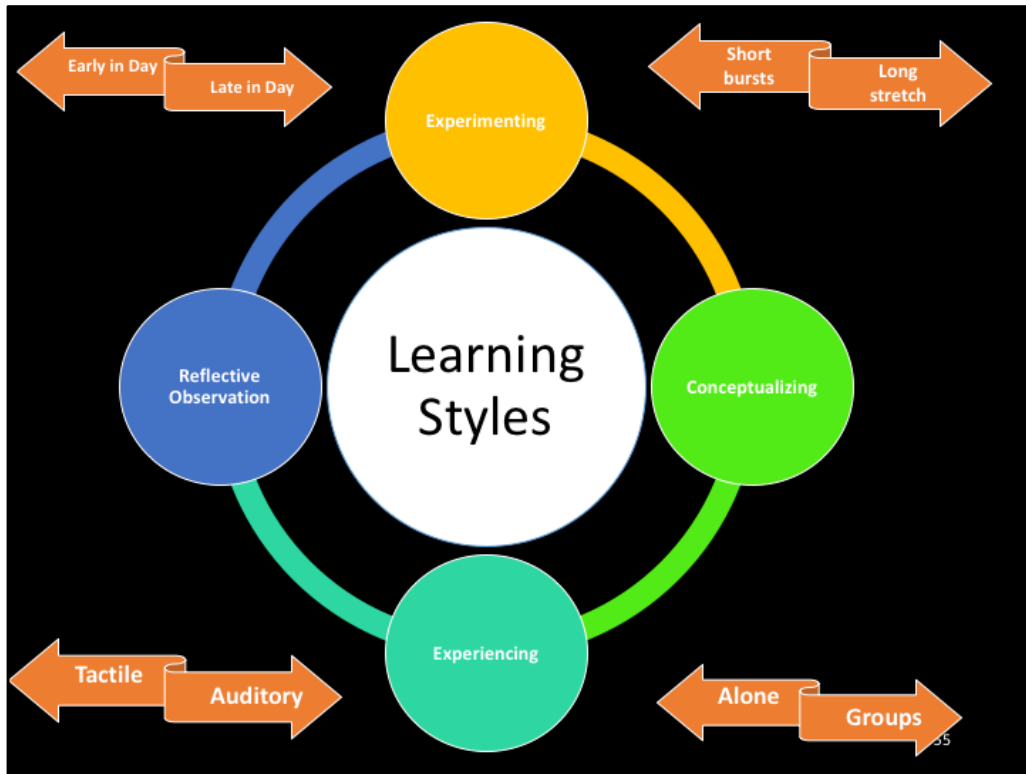
A: The people that love lectures? Tone, rhythm, breaks, body language

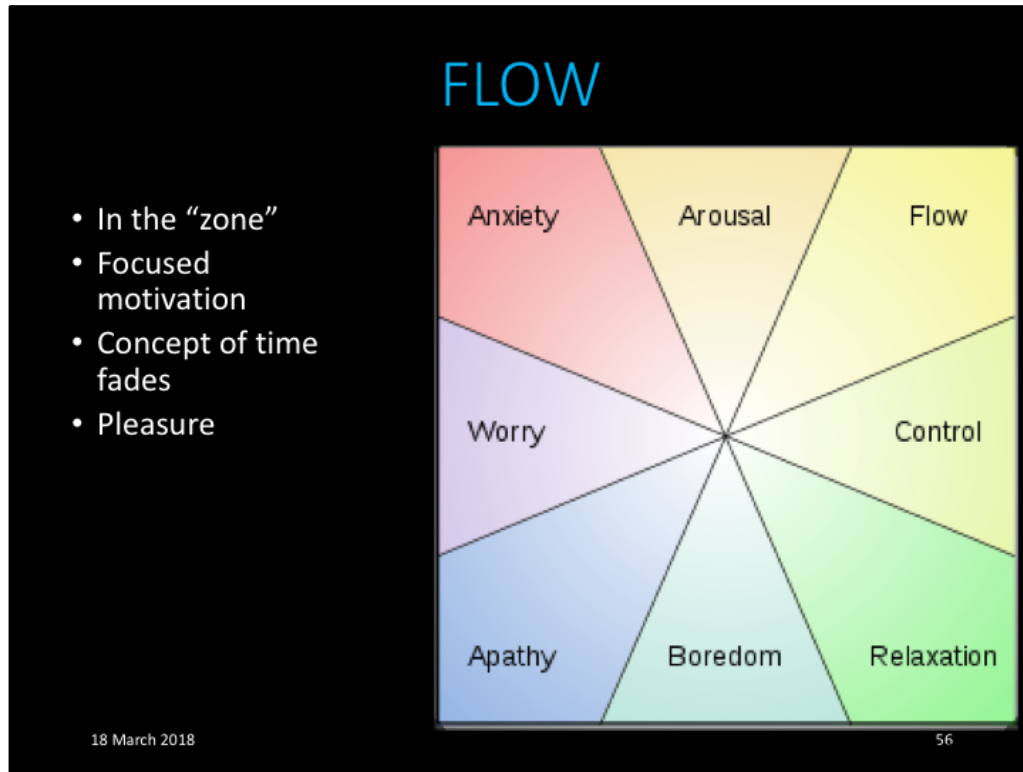
R: like to take notes in lectures, highlight, etc.

K: Many like to learn through doing, they aren't afraid to fail?

Default questions on **FOTO have learning styles for patients**

An **example:** I asked a resident to describe what they would be looking for while correcting a pelvic mal-alignment but they had a hard time putting it into PT terminology. However, they were able to give the patient beautiful verbal cues in the mirror once the single leg stance test was conducted. They wanted to see the patient, feel the patient, and hear the patient's verbalization prior to being able to accurately communicate to me in the context I was asking. Help the learner express themselves in the language they have mastery of, but help build fluency in all aspects of learning, language and communication.



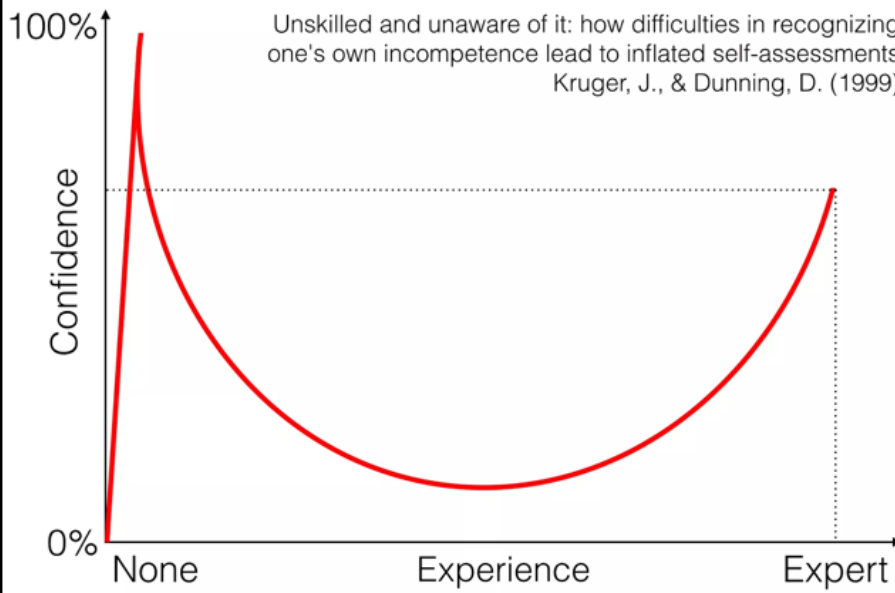


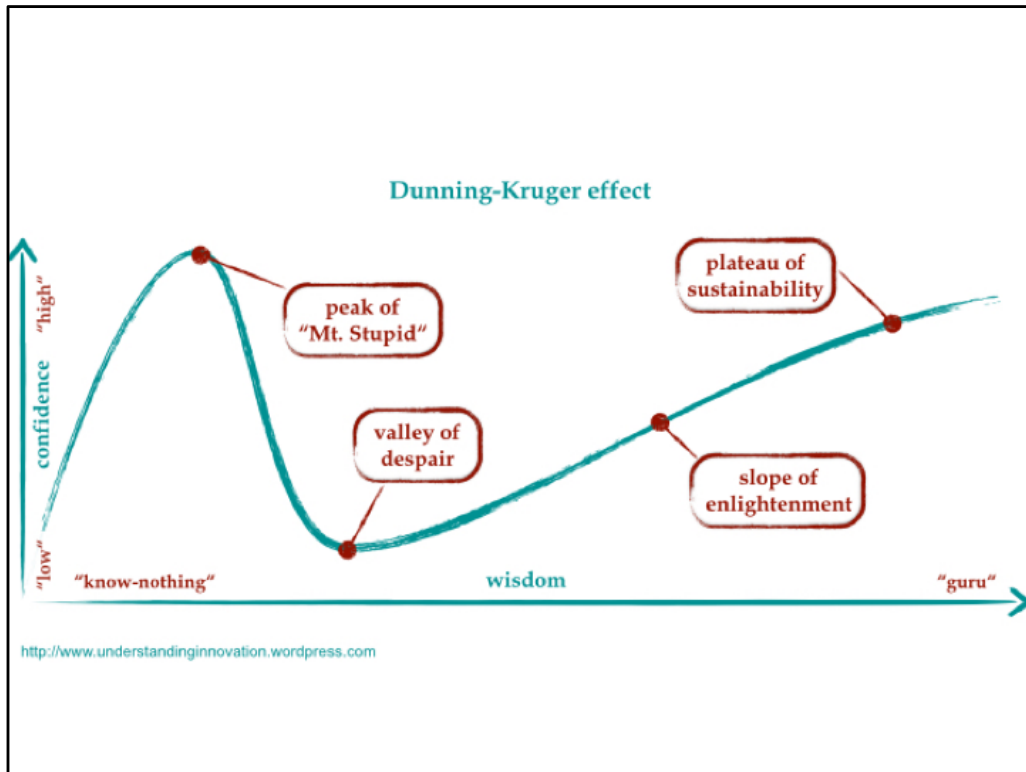
FLOW:

mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity

Dunning-Kruger Effect

Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments
Kruger, J., & Dunning, D. (1999)





4 Linear Stages of Competence

- Unconscious Incompetence
- Conscious Incompetence
- Conscious Competence
- Unconscious Competence

See One, Do One, Teach One

18 March 2018

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The style will depend on the stage.

Competence

- “Habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served.”

Epstein, JAMA 2002

- Impermanent
- Context-Dependent

Teaching Styles Behaviors

<u>Assertive</u>	<u>Suggestive</u>	<u>Collaborative</u>	<u>Facilitative</u>
Gives directions	Suggests alternatives/choices	Elicits/accepts learner's ideas	Elicits/accepts learner's feelings
Asks focused questions	Asks leading questions	Uses open/exploratory questions	Uses open/Reflective questions
Gives information	Gives opinions	Relates personal experiences	Offers feelings/encouragement

Learning 101 Part 2 of 6 61

See correlations with **learning theories?** (behavioristic, cognitivistic, constructivistic, connectivistic, humanistic)

Motivation

62



Extrinsic Motivation: fear of disappointment, testing, social embarrassment, Carrots and Sticks

Intrinsic: Driven by passion, not by requirement, Heuristic or algorithmic

Let's think about TJC'S carrots and sticks (feedback from peers/mentors, annual reviews, salary raises, bonus, mandating course attendance, FOTO, patient outcomes, etc).

Motivating the learner

- Don't let your intuition and your style "leave the resident behind in the dust"
- Balance critical reflection and "Flow"
- Team
 - Collaborate in front of the patient
 - In front of the patient ask questions the learner can answer
- Be prepared to rescue the resident
 - Develop signals & learn their body language
- Less is often more.

64

Does their style depend on their motivation in the moment?



WIKIPEDIA: **Grit** in [psychology](#) is a positive, non-cognitive [trait](#) based on an individual's passion for a particular long-term goal or endstate, coupled with a powerful [motivation](#) to achieve their respective objective. This perseverance of effort promotes the overcoming of obstacles or challenges that lie within a gritty individual's path to accomplishment, and serves as a driving force in achievement realization. Commonly associated concepts within the field of psychology include "perseverance", "[hardiness](#)", "[resilience](#)", "ambition", "[need for achievement](#)" and "[conscientiousness](#)". These constructs can be conceptualized as [individual differences](#) related to the accomplishment of work rather than latent ability.

Click image or here for GRIT video:

http://www.ted.com/talks/angela_lee_duckworth_the_key_to_success_grit#t-32800

Learning Theory Objectives

- Clinical Reasoning Frameworks
- Meta-cognition
- Feedback
- RE-flection
- Meta Teaching
 - QUESTIONING
 - POSE (APPRENTICESHIP)
 - ONE MINUTE MENTOR
 - SNAPPS
 - GNOME



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ILOO – intended learning outcomes/objectives

Clinical Application of Learning Theory Objectives

Backward Reasoning
Forward Reasoning
Narrative Reasoning
Collaborative Reasoning?



67

ILOO – intended learning outcomes/objectives



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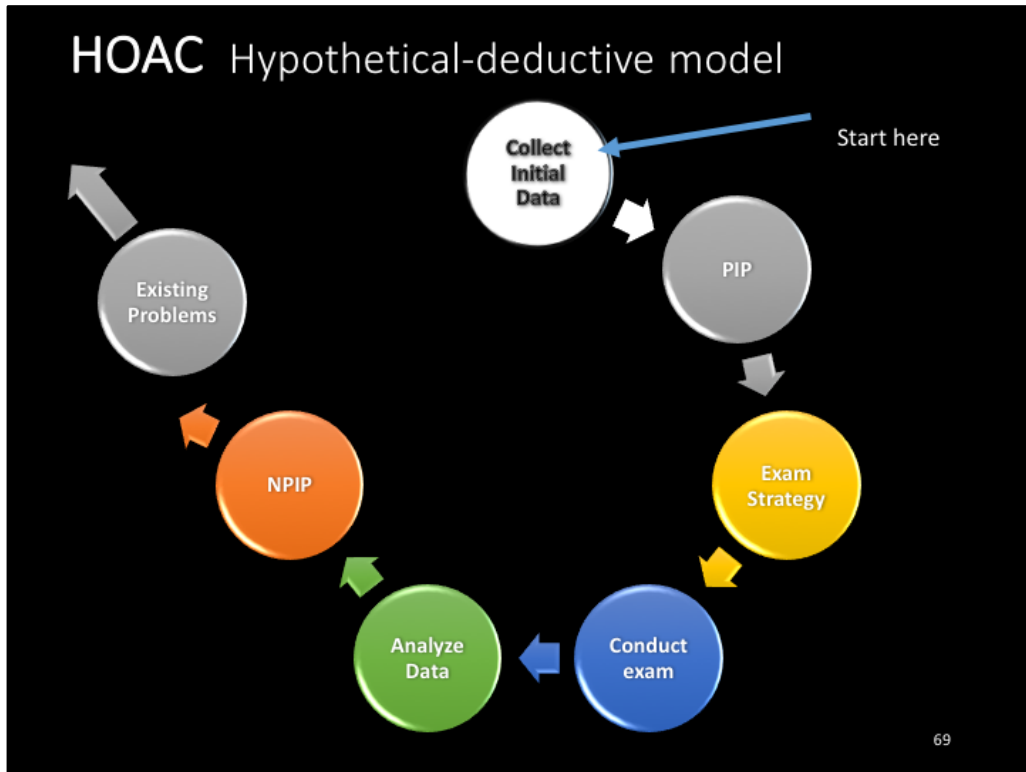
What's the difference?

Critical thinking = habits of mind.

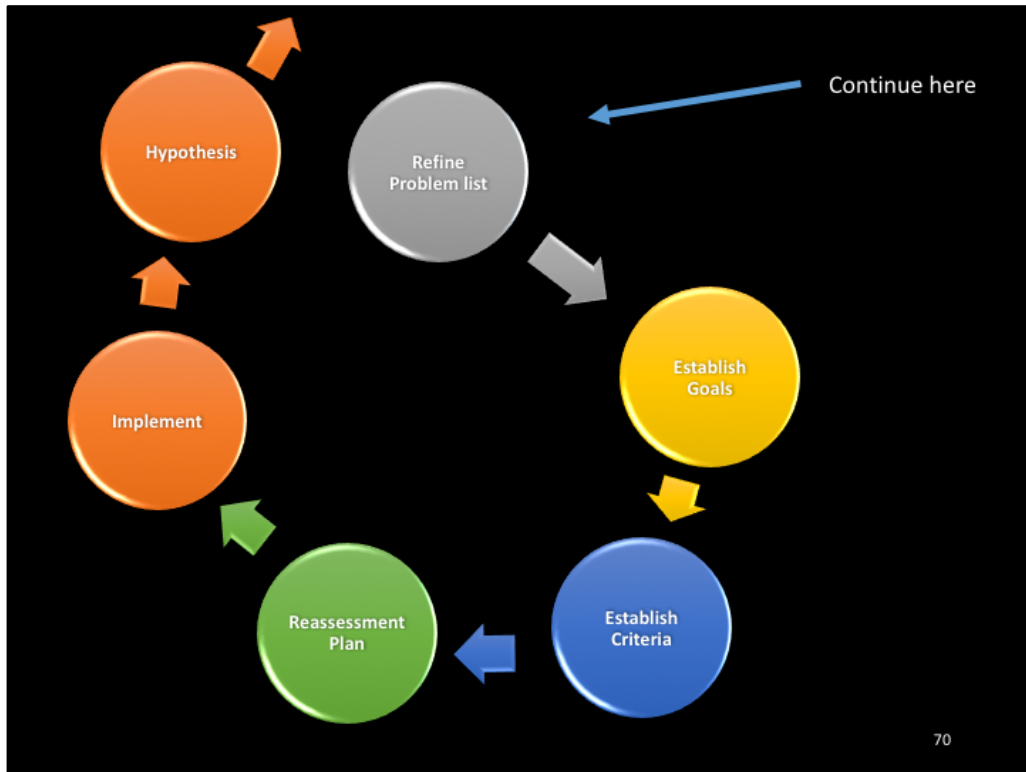
Clinical reasoning = applying habits.

Clinical judgement = managing uncertainty.

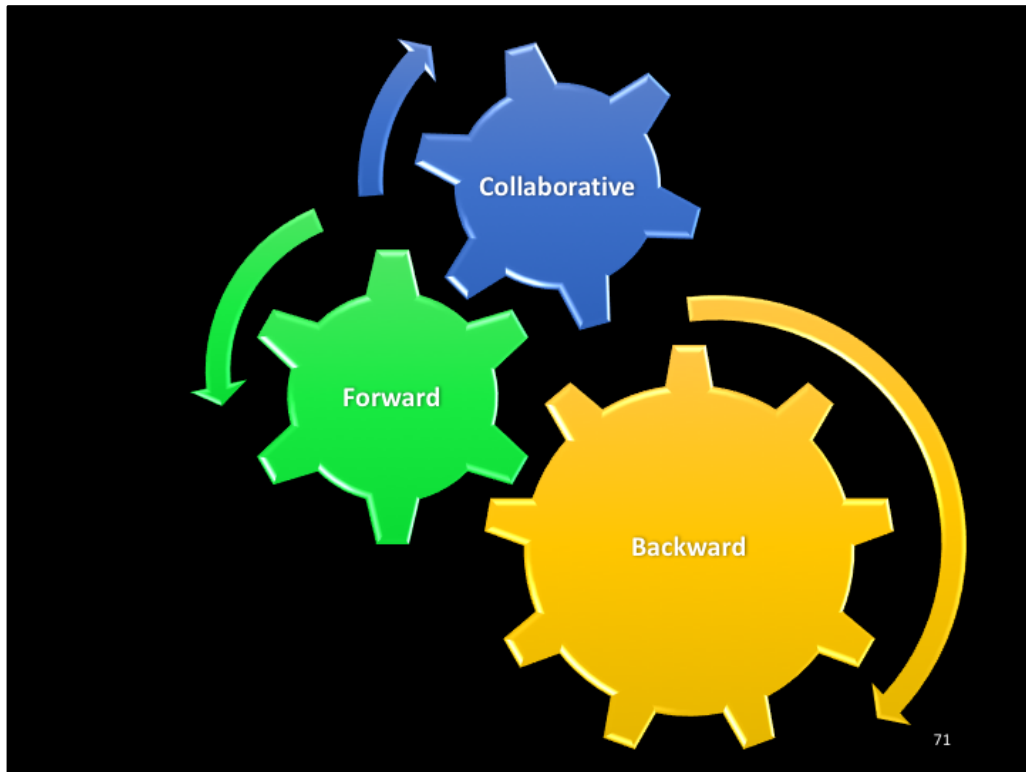
Why does it matter?



Better for novices, or novel situations.
How would you prod them with each section?
How might each section go wrong?



HOAC continued



CLINICAL REASONING FRAMEWORKS

Backward: methodical, go through steps, best for the novice. Collect all the data and retrospectively outline a plan

Forward: pattern recognition, intuitive

Collaborative: many names: narrative/collaborative/interactive: "stories," illness experiences, meaning perspectives, contexts, beliefs, and cultures.

Forward Reasoning Differences

- Diagnosis prior to obj. exam is solid
- Maybe even diagnosis prior to Subj exam if good intake data (FOTO, script, registration form)
- Pattern recognition
- More likely to miss outlier cases

Narrative Reasoning

Patients often have difficulty communicating the nature of the problem, remembering the specific timing of events, and interpreting the clinician's questions; by the same token, clinicians often have similar difficulties interpreting and remembering patient's accounts of their illness.

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Some evidence for the benefits of narrative reasoning leading to clinical/critical thinking skills: Humanities students fare better on the MCAT. Among the 2006 applicants to medical school, humanities majors outscored biology majors in all categories. (including biology and biochemistry)

Develop illness scripts (pattern recognition) through stories.

Narrative Reasoning

patient's lived experience, their STORY

74

Do we sometimes devalue the patient's story ("lived experience") so that we can get the details of our examination to fill in our documentation and move the patient along?

Do we allow the patient to tell their own story in their own way? Or do we interrupt them in order to gain efficiency? What do we lose by doing that?

Narrative Reasoning

- Patients are imperfect historians BUT clinicians are imperfect interviewers. So....
- Say something empathic and listen, be present and mindful.
- Suspend judgement
- Summarize their story

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To work on your own narrative reasoning skills, try...

Reading and interpreting complex stories (literature, poetry, music),
Listening and telling stories
Writing/reflectively

Reflection & Questioning

Metacognition

Mindful/Reflective Practice

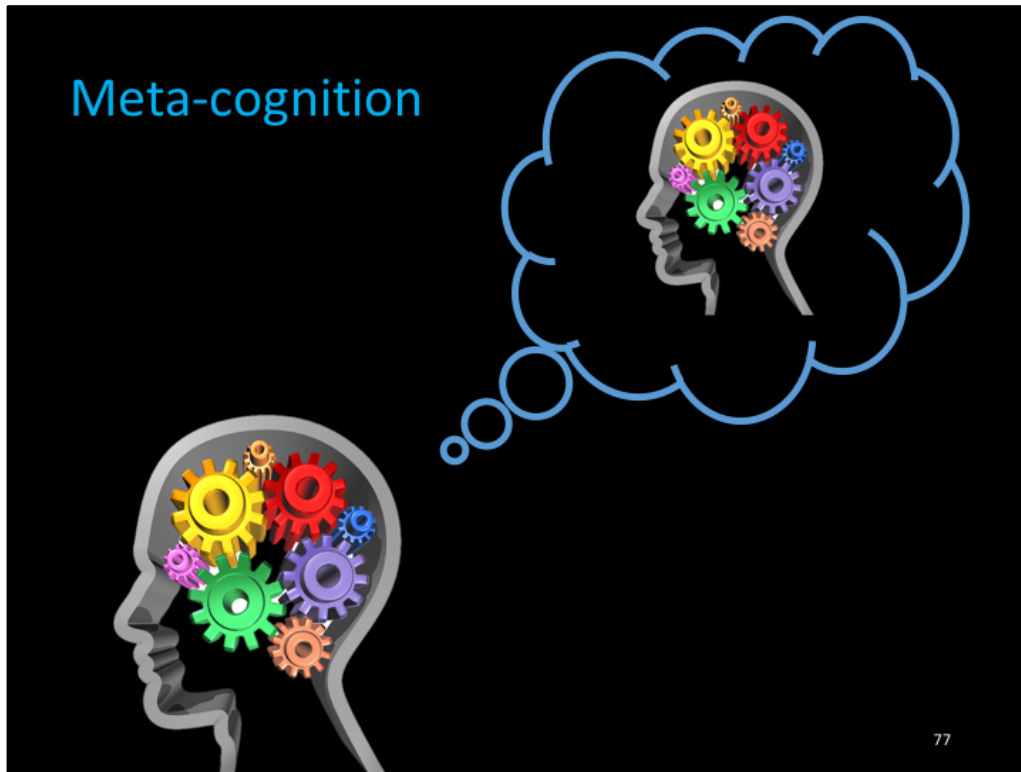
Self Assessment

Questioning (Socratic Method)

SNAPPS tool

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INTENDED LEARNING OUTCOME AND OBJECTIVES



Metacognition – thinking about thinking! Difficult for the average PT student.

Being critically self-aware may be the most important aspect of development.

We use self-assessments, audioreflections, debriefing with residents, clinical reasoning forms, documentation review,

Metacognition assumptions:

Conscious

Deliberate

Self-regulated

Critical

Often planned

<http://cft.vanderbilt.edu/guides-sub-pages/metacognition/>

In *How People Learn*, the National Academy of Sciences' synthesis of decades of research on the science of learning, **one of the three key findings of this work is the effectiveness of a "metacognitive" approach to instruction**" (Bransford, Brown, & Cocking, 2000, p. 18).

Metacognitive practices increase students' abilities to transfer or adapt their learning to new contexts and tasks (Bransford, Brown, & Cocking, p. 12; Palincsar & Brown,

1984; Scardamalia et al., 1984; Schoenfeld, 1983, 1985, 1991). They do this by gaining a level of awareness *above the subject matter*: they also think about the tasks and contexts of different learning situations and themselves as learners in these different contexts. When Pintrich (2002) asserts that “Students who know about the different kinds of strategies for learning, thinking, and problem solving will be more likely to use them” (p. 222), notice the students must “know about” these strategies, not just practice them. As Zohar and David (2009) explain, there must be a “*conscious meta-strategic level of H[igher] O[rder] T[hinking]*” (p. 179).

Mindful & Reflective Practice

- Experts estimated to be 4x more reflective (frequency) than the novice
- Experts tend to be adept at “IN-action” or “on the fly”
- Depth of reflection is typically enhanced in experts



Mindful Practice

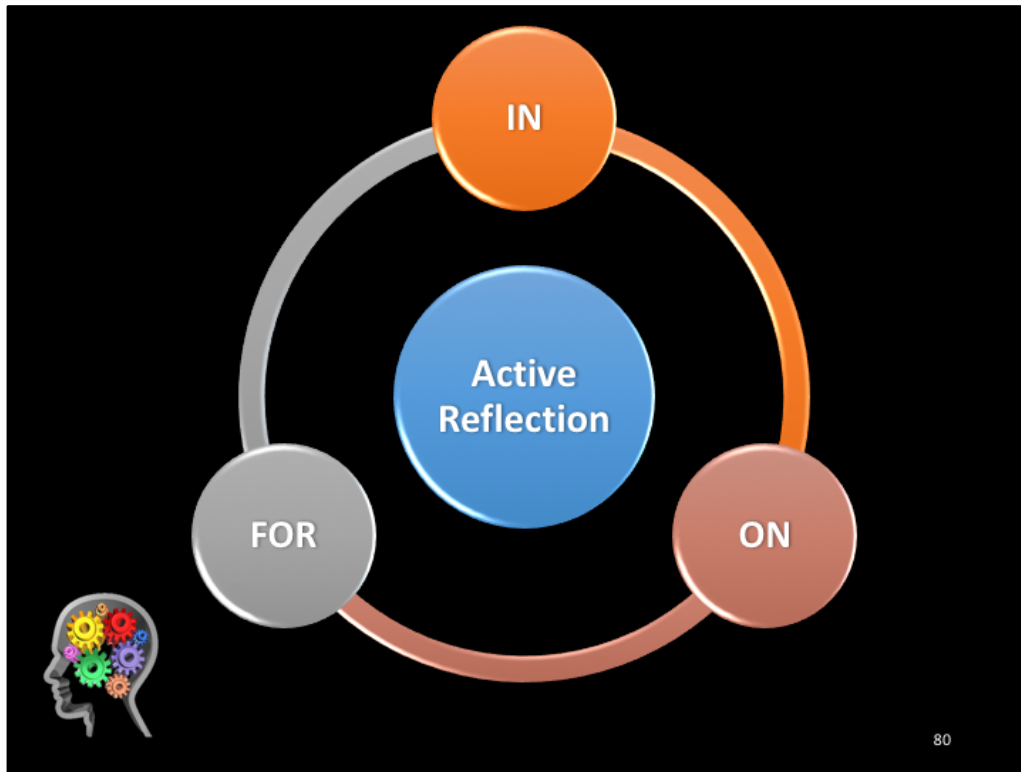
Table 2. Characteristics of Mindful Practice

Active observation of oneself, the patient, and the problem
Peripheral vision
Preattentive processing
Critical curiosity
Courage to see the world as it is rather than as one would have it be
Willingness to examine and set aside categories and prejudices
Adoption of a beginner's mind
Humility to tolerate awareness of one's areas of incompetence
Connection between the knower and the known
Compassion based on insight
Presence



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Excellent metacognitive perspectives. Very persuasive article, Epstein: Mindful Practice, 1999.



Reflection for action is in anticipation of an experience and helps the learner hit the ground running (having a plan, not wasting time)

Reflection-on-action is described as occurring after the clinical action has stopped, and is a way of cognitively organizing experiences, or making sense of things.

Reflection-in-action: “thinking on your feet.” occurs in the midst of action, and allows for modification of the situation as new information emerges. Another way of conceptualizing reflection-in-action is

Tell me if this is for-in-on action reflection facilitated questions:

1. “What are you feeling with that manual test, and is the patient reacting like you assumed they would based on their subjective?”
2. “Where there any potential reasoning errors/bias you were aware of in your last case with Mr. Smith?”
3. “Will the updated FOTO score alter your treatment plan for the day or reinforce it?” (don’t ask leading question)


1=IN, 2=ON, 3=FOR

1st order experience

We do not learn from experience – we learn by thinking about our experience

2nd order experience

“RE-membering, RE-living, RE-telling”



81

RE-FLECTION IS ALL ABOUT THE RE-DO.

Continued evidence that experts use less **biomedical knowledge**

Rely more on known connections between clinical features and **illness scripts (clinical pattern recognition)**

Our role and the healthcare system is getting more **complex**

If illness scripts and script building is an important strategy in practice – should learning and instructional methods change??

Sanders J. **The use of reflection in medical education: AMEE Guide No. 44**

Medical Teacher. 2009, Vol. 31, No. 8 , Pages 685-695

(doi:10.1080/01421590903050374)

Quote: Shulman, 2004

Getting the inside out!

- explain rationale/reasoning process
- willing to admit and correct errors
- must not feel threatened when verbalizing

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TRAINEES MUST VOICE THEIR THOUGHTS. OBSERVATION IS NOT ENOUGH, AND OF COURSE USING AN APPRENTICESHIP MODEL WHERE THEY OBSERVE YOU DOES NOT WORK EITHER.

Self Assessment

- A tool for self-efficacy and adult learning
- Helps the learner and teacher diagnose the knowledge/skills/attitudes

83

95% of US professors think they are above-average educators. We all have strengths/weaknesses. Therefore self-assessment cannot be used alone.

SNAPPS

- Summarize case
- Narrow differential
- Analyze differential
- Probe for uncertainty
- Plan steps in care
- Select case related self-study options



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When you want the learner to take charge on a case, SNAPPS can guide the meta-cognitive process in an efficient manner.

Did learner collect enough or appropriate information?
Have they constructed an appropriate differential?
Active probing (verbal meta-cognition)
Make a commitment to the next steps in management
Learning plan

Wolpaw T, Papp KK, Bordage G. *Acad Med.* 2009;84:517-524

<http://www.practicaldoc.ca/teaching/practical-prof/teaching-nuts-bolts/snapps/>

Runner s/p. microdiscectomy

- Mrs. Runner comes to PT 4 weeks s/p microdiscectomy to L5-S1, after failed PT and cortisone injections. Symptoms are now mild LBP with frequent but mild paresthesia's down lateral thigh to the dorsum of the foot. They are anxious to begin a walking program immediately, and progress to running within 8 weeks so they can complete a half-marathon.

85

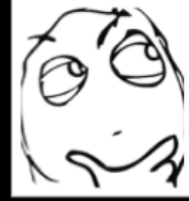
What do you think it is anatomically?
Differentiating clinical features?
Categorization?
MT Priority
TE/NRE priority
External Support

SNAPPS

Role Play

- Mentee – ?
- Mentor – ?
- Mentor Grader - ?

QUESTIONING



- Remember, they hired you!
- Make sure appropriate time
- Determine learners stage
- Push learners to higher stage

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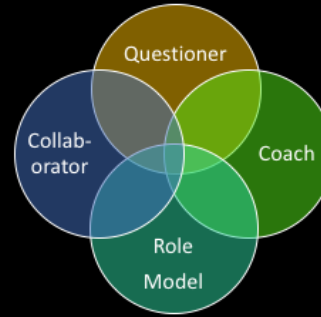
Should you tell the learner the answer or ask questions to help them get to the answer, or at least to your point!?! Remember the cone of learning!

One of the ways to teach students how to think (clinically reason) and find the **right answers**, is first to ask the **right questions**.

Do you see the connection to previous theory concepts? **stages of learning** and the **learning vector**

Which ones do you typically use?

QUESTIONING



- **BROADENING** – KNOWLEDGE
- **REASONING** – HOW
- **JUSTIFYING** – RATIONALE, EVIDENCE
- **HYPOTHETICAL** – SYNTHESIS
- **ALTERNATIVE** – INTEGRATION/EVALUATION

88

Schell, K. Teaching Tools: promoting student questioning. Nurse Educator.
BROADENING – KNOWLEDGE. What are all the structures that could cause LBP?
REASONING – CLINICAL DECISIONS (what was the process on how I arrived at that decision...what steps did you take). How did you arrive at the SIJ as the primary pathology to rule in/out and treat.
JUSTIFYING – RATIONALE, EVIDENCE (validating the steps and pieces of data). What about this patient suggests SIJ pain?
HYPOTHETICAL – SYNTHESIS. Push them beyond knowledge, “what if they had centralization too, how would that affect your examination and intervention?”
ALTERNATIVE – INTEGRATION/EVALUATION (what if the patient didn’t want manipulation, what else might you do for this?)

REFLECTIVE QUESTIONING

Assuming they are discussing a very important procedure, what did you like, what did you not like in this video?

89

RIME model?

REFLECTIVE QUESTIONING

Debrief

Debrief of feedback:

Incomplete feedback (asked about planning, collaborating before hand, planning for assistance. Also, did not include goals, time frame (GNOME)

R - Reporter

I - Interpreter

M - Manager

E - Educator

Mentoring Feedback Form

- <https://docs.google.com/document/d/1F95JSB36KIdQaopb6qEX01-QiOhD0Pb6E3ToOYgOxdI/edit#>

91

Let's review the form and some of the resources on this form, notably the "Questioning section"

Case #2 – Golfer with LBP with claudication

- Mr. Golfer is 60 year old male with 6 months of progressive low back pain with radiating leg pain, which in recent months has progressed to pain in leg & testicular region > back when standing and walking for a prolonged period of time. He did take prolonged corticosteroids for chronic bronchitis and had a bad car accident that markedly exacerbated his symptoms last week which is why he sought PT.

92

What do you think it is anatomically?
Differentiating clinical features?
Categorization?
MT Priority
TE/NRE priority
External Support



The mentor uses coaching strategies for remediation, insight, and selfdiscovery of the resident/fellow.¹

Feedback is the backbone of post-professional learning. This is essentially the way a **mentor** guides reflection in a **learner**.

Be clear that you are providing feedback. Yes, this sounds silly. But if the learners feels you are just chatting/judging, etc. they may not be as receptive or prepared to think deeply.

Note the two way street! Whatever role(s) you have, feedback is important.

The “socratic” method leads them to the right answer (without giving it) through breaking apart their logic and helping them piece it back to together. The goal is to get to the answer from their own mouth.

BARRIERS

- Too busy
- Concern on the part of the faculty that the data is not objective and based on personal observation
- Lack of knowledge, ability, and comfort to give feedback
- Concern about creating poor rapport between learner/teacher

- Concern about consequences of negative feedback
- Different perceptions: Teachers believe they give feedback more frequently than learners say they received it.
- The culture: culture of medicine is hierarchical, promoting one-way flow of information from teacher to learner

Why Feedback?

1. They crave it!
2. Diagnose your learner
3. It's high on the "cone of learning"
4. It is proven to build reasoning skills
5. It builds self-efficacy as an adult learner
6. Self Assessment is often poor



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Medical students surveyed often like more (not less) feedback on their clinical skills
Residents identify feedback as the essential element in effective mentoring
Mentors feel they provide feedback better than they actually do
Feedback improves reasoning, and ultimately self-efficacy as an adult learner
Clarifies goals and expectations

- Reinforces good performance
- Provides a basis for improving performance and correcting mistakes (formative assessment).
- Serves as an assessment point for overall (summative) assessment
- Offers insight into actual performance and its consequences rather than relying on what the learner thought or intended to do.
- Reduces reliance on self-assessment which is unreliable
- Reduces anxiety, insecurity about performance
- Demonstrates commitment to the learner
- Promotes two-way communication
- Provides guidance

Why NOT Feedback?

1. Difficult to give
2. Little time to give it
3. It “feels” bad



95

It takes practice, practice, practice.

“It is impossible to speak in such a way that you cannot be misunderstood.”

96

Karl Popper

Feedback isn't going to be easy. This is why it is important for the feedback to be both ways. They may misunderstand your guidance, but there is less likely to be misunderstanding if you can get **them to “teach back”**, notably if they can get to a reasonable answer or a plan to find the answer.

FEEDBACK

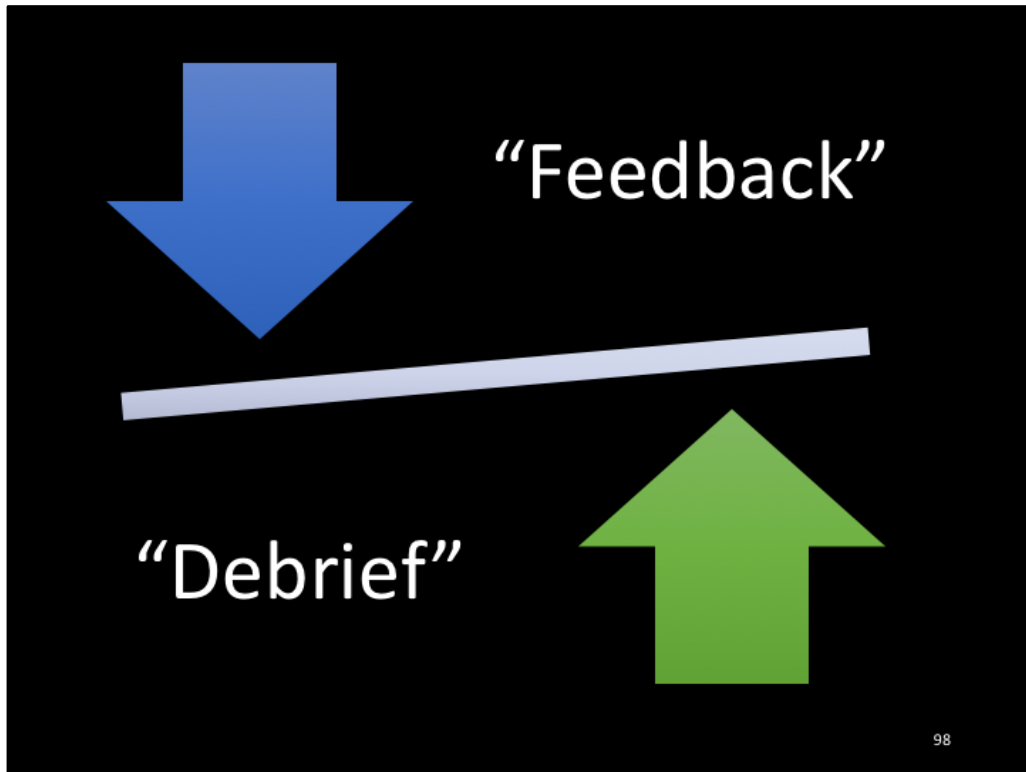
Frequent Barriers

- Lack of Orientation
- Alliance is poor
- Alliance Building (common goals)
- Inadequate entrustment
- Lack of promptly addressing barriers
- Desire to appear knowledgeable - PRIDE
- Scheduling inappropriate patients
- Terse
 - Why did you do that? I want you to do it this way!
- Mentee more experienced than mentor

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Too busy

- Concern on the part of the faculty that the data is not objective and based on personal observation
- Lack of knowledge, ability, and comfort to give feedback
- Concern about creating poor rapport between learner/teacher
- Concern about consequences of negative feedback
- Different perceptions: Teachers believe they give feedback more frequently than learners say they received it.
- The culture: Culture of medicine is hierarchical, promoting one-way flow of information from teacher to learner



Feedback: 1 way, implies constructive/negative. Upside is that it's clear that "feedback mode" is engaged, and the learner is prepared for this.
Debrief: 2 way, implies collaborative. Could be too conversational.

Successful Learner/Teacher Interaction Bladder Endoscopy

<https://www.coursera.org/learn/clinical-skills/lecture/Wi27k/05-14-debriefing>

Start at: 8:04

99

What could have been better? Who established the learning goal? See next slide.

Successful Learner/Teacher Interaction
Bladder Endoscopy – Debrief (1:13)

Successful Learner/Teacher Interaction
Tense Debrief – Loss of 5 liters of
blood

Successful Learner/Teacher Interaction

Tense Complication – Debrief

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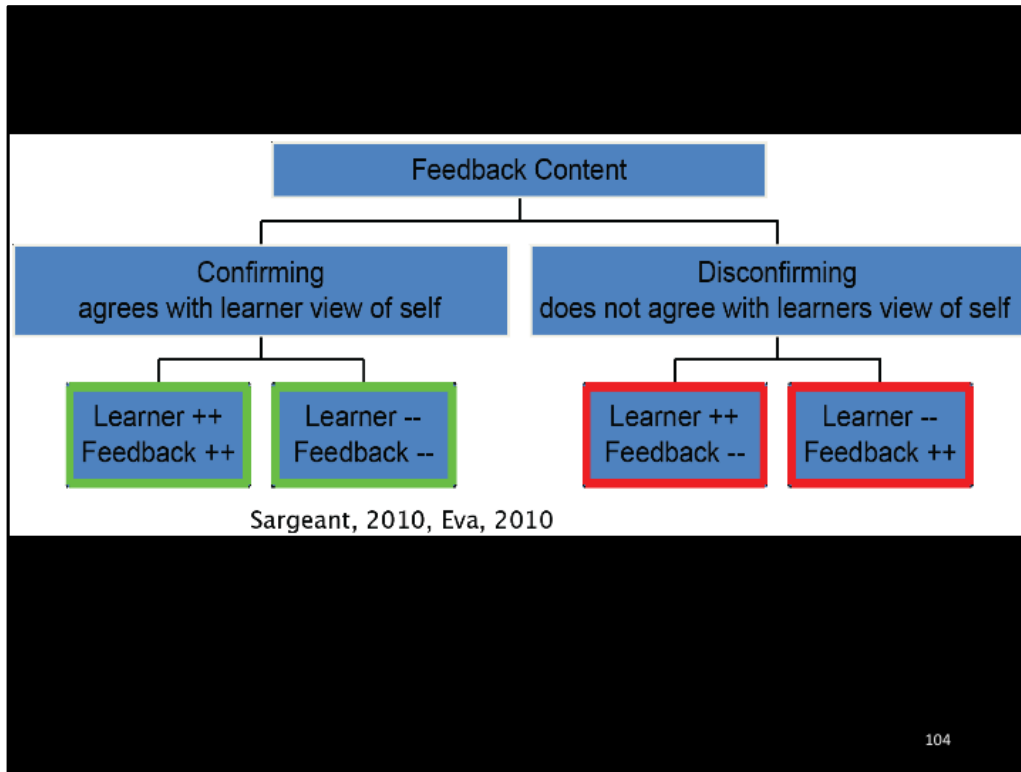
FEEDBACK – Pitfalls



- Halo/Reverse Halo Effect
 - Error of central tendency (everybody's satisfactory!)
- Rater mood or memory
- Proximity error (she works next to me every day...)
- Error of leniency (I don't want them to be stressed...)
- First impressions (she did good on X, so Y will also be good)
- Contrast Effect (well, Sally did...)
- Issues of Diversity (race, creed, background...)

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Credentialed Clinical Instructor Program. 3rd ed. 1111 North Fairfax Street, Alexandria, VA 22314-1488: American Physical Therapy Association; 2009.



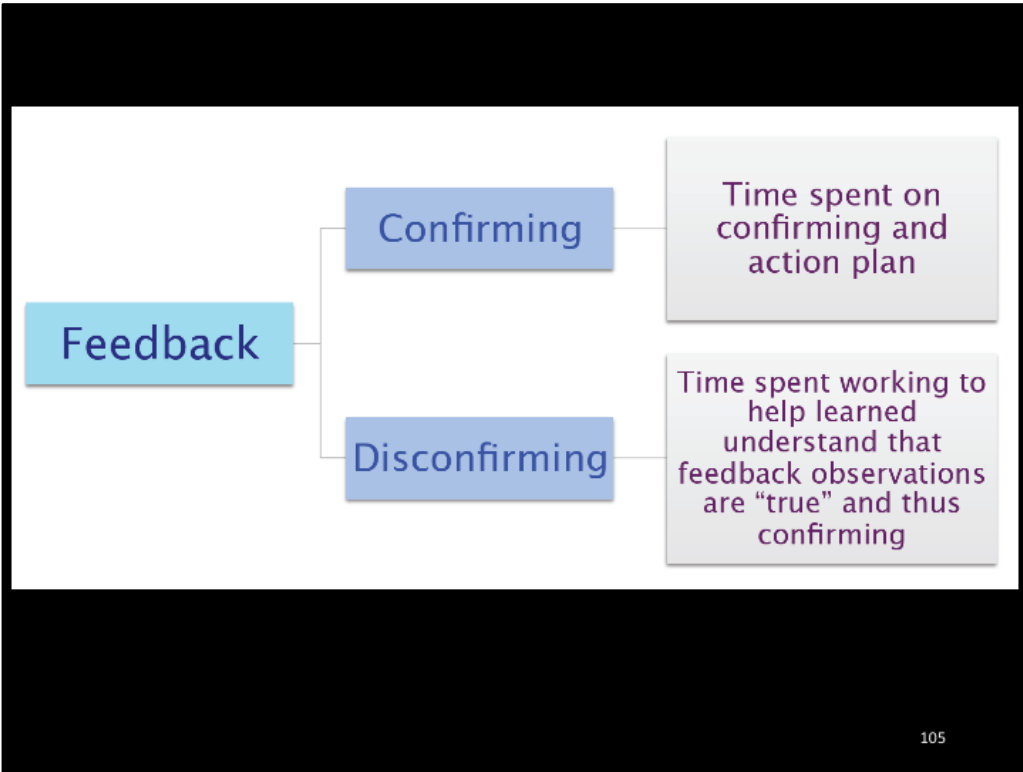
Confirming vs. Disconfirming may be more relevant than positive vs. negative feedback, or even positive vs. constructive feedback

If you give what is considered constructive/negative feedback, and the learner recognizes this has a deficit internally, then the feedback is considered confirming.

If the learner disagrees with your assessment of their knowledge, skills or attitudes, then the mentoring must focus on addressing the disconfirming nature of the feedback, even if you gave positive feedback.

This is where the self-assessment form can really come in handy. Does your feedback align with their own interpretation of their knowledge/skills/attitudes (KSAs).

Example, you have a learner that assumes they are a great communicator, and you feel they are not, the feedback you provide may be disconfirming to their sense of self. Your goal is not just to tell them they are good/bad, you have to address the learners attitude towards their own thoughts/beliefs/emotions.






Be wary of the disconfirming, habitual, disingenuous feedback sandwich!

GNOME

GNOMONIC!

- Goals
- Needs
- Objectives
- Methods
- Evaluation



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This is helpful when a deficit in a learner is identified, and an intervention needs to happen.

Base your GNOME on a deficit that the learner and trainee have MUTUALLY identified. The resident should be involved in setting up these GNOMES if time allows. Here is an example: **Goal** is to accurately assess, treat, monitor intervention, and discharge intervention for mobility deficits of the shoulder girdle (GH, AC, SC, scapulo-thoracic). **Needs** expand anatomical/biomechanical/pathophysiologic knowledge and apply via psychomotor techniques on a variety of patients. **Objective** is to be able to detect with specificity what part of the shoulder girdle, capsule, muscle, myofascia, nerve, etc. needs treatment and to implement that treatment on patients with a variety of conditions (e.g. RTC repair, AC joint sprain, shoulder instability, and adhesive capsulitis). **Method** is to practice skills discussed in this mentoring session with all shoulder patients, review Godges Shoulder course materials and other materials as necessary, discuss this issue with onsite and other traveling mentors, review anatomy of the shoulder girdle, discuss during MD shadowing. **Evaluation** demo biomechanical assessment of posture/AROM/PROM/Accessory mobility (and intervention if applicable) while verbalizing clinical reasoning simultaneously. A grade of 2/3 is expected by mid-year, and a grade of 3/3 is expected by time of residency graduation, notably after mentoring with physician and UE fellows.



Mentoring Tools & Grading

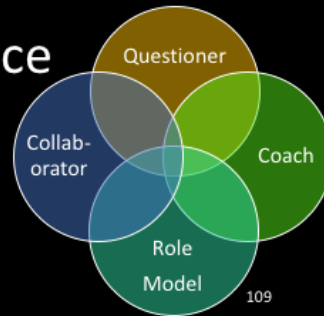
POSE (APPRENTICESHIP)
ONE MINUTE MENTOR
RIME
GNOME

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POSE

Apprenticeship

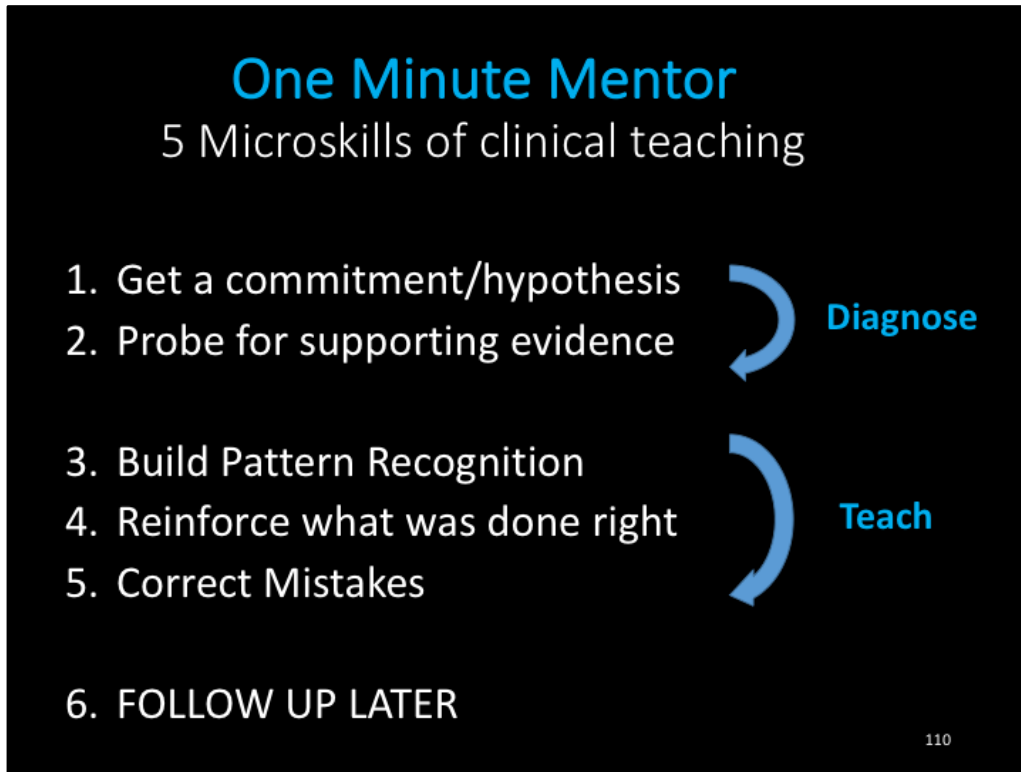
- P** review the experience
- O** utline your thoughts
- S** hare findings as you go
- E** valuate after the experience



See one, do one, teach one.

(BE ACTIVE BEFORE, DURING, AFTER)

Evaluation may involve SNAPPS and QUESTIONING in order to extract their reasoning, then a GNOME may follow if a large learning gap is identified.



Usually called the one minute preceptor.

Great for clinical scenarios where you are short on time!

Based on teaching Family Practice Physicians. Some similarities to the socratic method (can be toxic to learning).

Give example with Holly.

Bring in “pimping” concept, consider power dynamics.

Apply Blooms Taxonomy, Millers Competence Pyramid,

Clinical teachers first focus on diagnosing the patient’s problem, then on diagnosing the learner’s needs, and finally on providing targeted instruction

1. Get a commitment/hypothesis – on what is going on with the patient
2. Probe for supporting evidence – related to decision making
3. Teach general rules – only 1 pearl suggested
4. Reinforce what was done right – 1 or at times ideally 2 kudos
5. Correct Mistakes – one only



<https://www.youtube.com/watch?v=t9ytKlq8wL0>

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Watch this and identify the 5 micro-skills. This is a 1 minute video. **Proof of concept!**

PRECEPTOR – 1 minute

PRECEPTEE - 1 minute (or more)

5 MICROSKILLS

Goals

- Thinking skills
 - Metacognition
 - Pattern Recognition
 - Equifinality options



Watch this and identify the 5 micro-skills. This is a 1 minute video. **Proof of concept!**

PRECEPTOR – 1 minute

PRECEPTEE - 1 minute (or more)

Microskill #1: Get a commitment. Ask, “What do you think is the patient’s problem?” and they have to give you an answer. They’re committing to a diagnosis.

Microskill #2: Probe for supporting evidence. Ask “Why do you think it’s that?” and “Where’s the evidence?”

Microskill #3: Teach general rules. The idea here is that, for the most part, you don’t teach to the specific patient’s case. You say, “Well, in most patients with this condition...” You’re describing guidelines and teaching pattern recognition.

Microskill #4: Reinforce what was done right. This is just being a good teacher.

Microskill #5: Correct mistakes. By that I also mean create a mentoring environment where it is “safe” to admit to a mistake in order to put it right.

#1: Get a commitment/hypothesis

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. "What do you think is going on with this patient?" 2. "What other types of information do you feel are needed?" 3. "What would you like to accomplish in this visit?" 4. "Why do you think the patient has not responded to your plan?" | <ul style="list-style-type: none"> • EXAMINATION • EVALUATION • PLAN OF CARE • INTERVENTION • REASSESSMENT • OUTCOME/PROGNOSIS • CASE MANAGEMENT |
|---|---|

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MATCH THE QUESTION WITH THE STRATEGY

Rationale: Asking learners how they interpret the data is the first step in diagnosing their learning needs. Without adequate information on the learner's knowledge, teaching might be misdirected and unhelpful. When encouraged to offer their suggestions, learners not only feel more of the responsibility for patient care but enjoy a more collaborative role in the resolution of the problem.

#2 Probe for Supporting Evidence

- "How did the patients history lead you to that conclusion?"
- "What were the major findings that confirmed your suspicion?"
- "What are the key features of this case?"
- "What could you have delegated to support personnel?"
- EXAMINATION
- EVALUATION
- PLAN OF CARE
- INTERVENTION
- REASSESSMENT
- OUTCOME/PROGNOSIS
- CASE MANAGEMENT

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When discussing a case, the learner has committed him/herself on the problem presented and looks to you to either confirm the opinion or suggest an alternative. You may or may not agree with the opinion and your instinct is to tell them outright what you think about the case.

Preceptor: Before offering your opinion, ask the learner for the evidence that he/she feels supports his/her opinion. A corollary approach is to ask what other choices were considered and what evidence supported or refuted those alternatives.

Rationale: Learners proceed with problem solving logically from their knowledge and data base. Asking them to reveal their thought processes allows you both to find out what they know and to identify where there are gaps. Without this information, you may assume they know more or less than they do, and risk targeting your instruction inefficiently.

#3 Promote Pattern Recognition

General Rules

- “What was your big take away from this case?” Today's session? Have learner discover their own rules, guide them if they struggle.
- Have you seen this type of pattern before? Tell me what you have learned in your experience.
- “In these types of recalcitrant cases, it's a good idea to consider alternative strategies to regain quadriceps function. Any ideas”
- Patient's with “these type of contextual factors” may ofte affect the plan of care in what way?



If you skip the first two steps, then the next 3 steps will likely be shots in the dark and your instruction minimizes the risk of misjudging the learner's sophistication on the topic - resulting in either insulting or losing him/her, and wasting both of your time.

*“Instruction is both more memorable and more transferable if it is offered as a **general rule** or a **guiding metaphor**. Learners value approaches that are stated as more standardized approaches for a class of problems or as **key features** of a particular diagnosis.”*

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Anonymous.

#4 Reinforce what was done right

- Catch them doing something right!
- Be specific, but general enough to add to their pattern recognition brain.
- "Your sensitive counseling with that patient on pain management strategies seemed to really help them build motivation to explore untapped options."
- "You made above normal gains with knee flexion after such a short bout of soft tissue release, probably because you accurately diagnosed the condition as not joint related, or guarding related."

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Cue: The learner has handled a situation in a very effective manner that resulted in helping you, patients, or other colleagues. He/she may or may not realize that the action was effective and had a positive impact on others.

Preceptor: Take the first chance you find to comment on: 1) the specific good work and
2) the effect it had.

Rationale: Some good actions are pure luck, others are more deliberate. In either case, skills in learners are not well established and are, therefore, "vulnerable." Unless reinforced, competencies may never be firmly established.

#5 Correct Mistakes

- Allow them to correct their own mistakes first
- “You may be correct that the patient has an ACL tear. But you can’t rule that in/out without what test? Yep, the Lachman test. Next time, be sure to check that with someone with that MOI.”
- “You are right that over-pronation may be a key cause for the patient’s pain, but the orthotics aren’t working as well as you thought, perhaps because of what structural fault? Yep, the leg length. Maybe trying to address both simultaneously may help?”

5 Micro-skills – Role Play

Sensitive learner that is struggling with discharging an ACL patient at visit 35 and returning to high school soccer. Remaining impairments include muscle atrophy, 80% thigh strength, pelvic instability during running with associated poor knee flexion wave, very light effusion after an intense 1.5 hour training session.

RIME Model

R - Reporter

I - Interpreter

M - Manager

E - Educator

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This is similar to the Learning Vector model, but has some different elements: This is organized in action verbs, indicating a behavior.

EXAMPLE:

R: "they have anterior knee pain for the last 4 weeks secondary to a lot of jumping at basketball camp"

I: "they present with jumpers knee, notably a tension overload involving the patellar ligament"

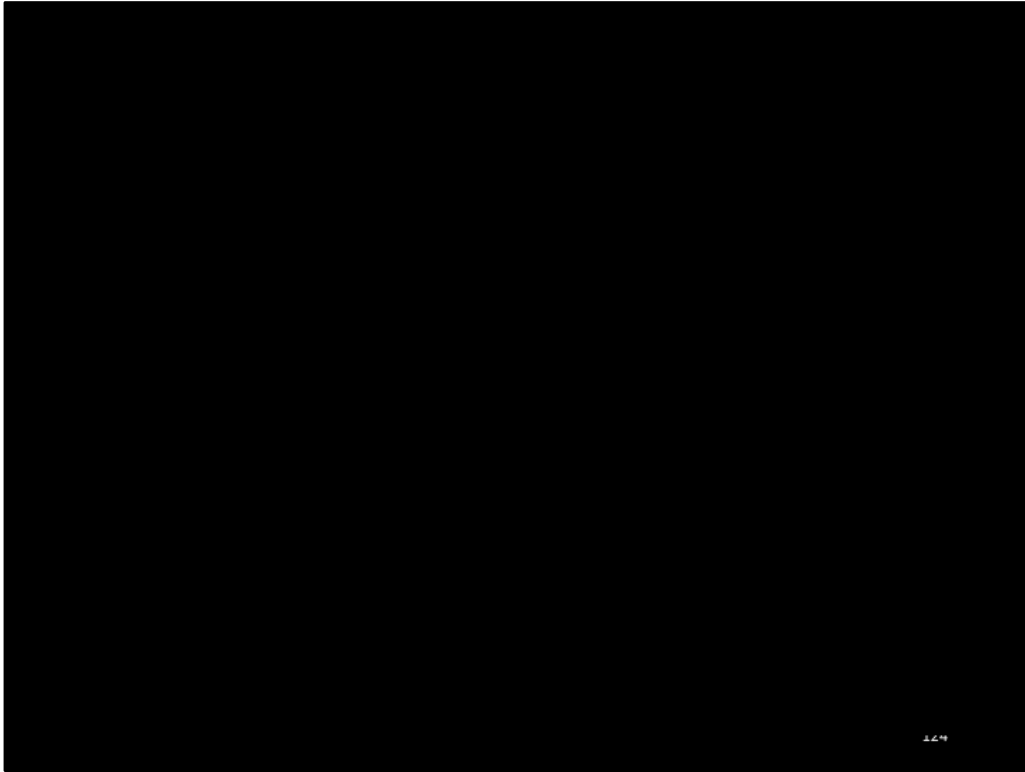
M: "we are resting, taping, stretching, strengthening and functionally retraining"

E: "I have called the coach, educated the parent and player about why this happened, and we are resting, taping, stretching, strengthening and functionally retraining"

In the mentoring feedback form grading scale, the "Behaviors" column helps to outline this model.

Assuming they are discussing a very important procedure, what did you like, what did you not like in this video?

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Debrief of feedback:

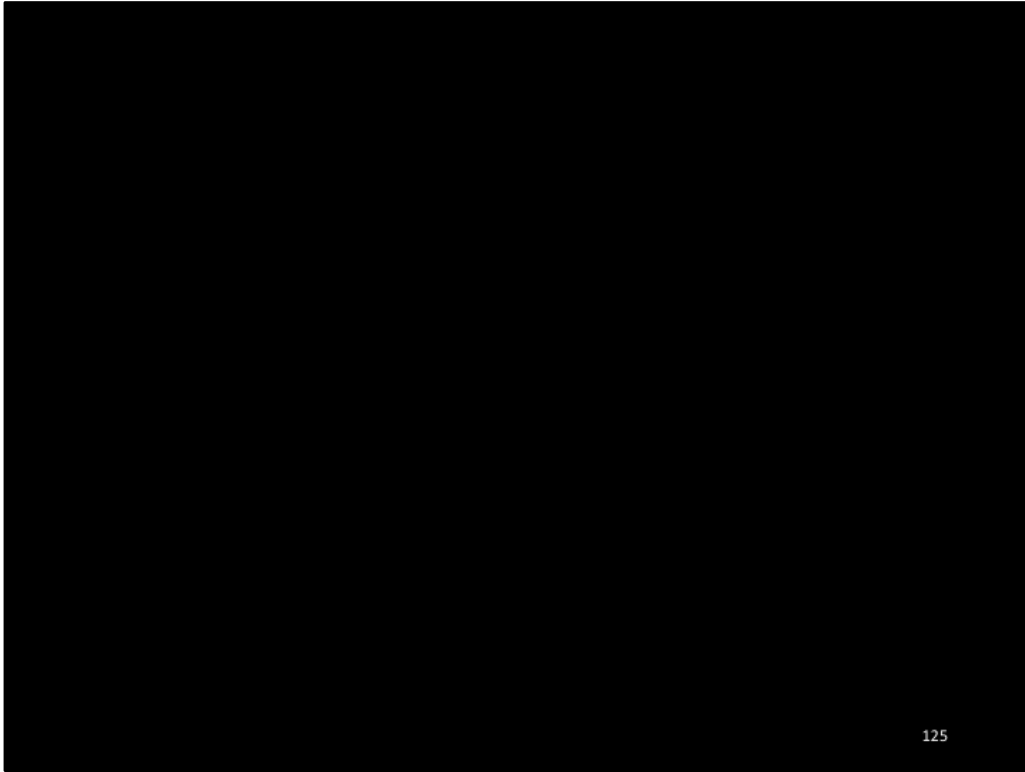
Incomplete feedback (asked about planning, collaborating before hand, planning for assistance. Also, did not include goals, time frame (GNOME)

R - Reporter

I - Interpreter

M - Manager

E - Educator



Debrief of feedback:

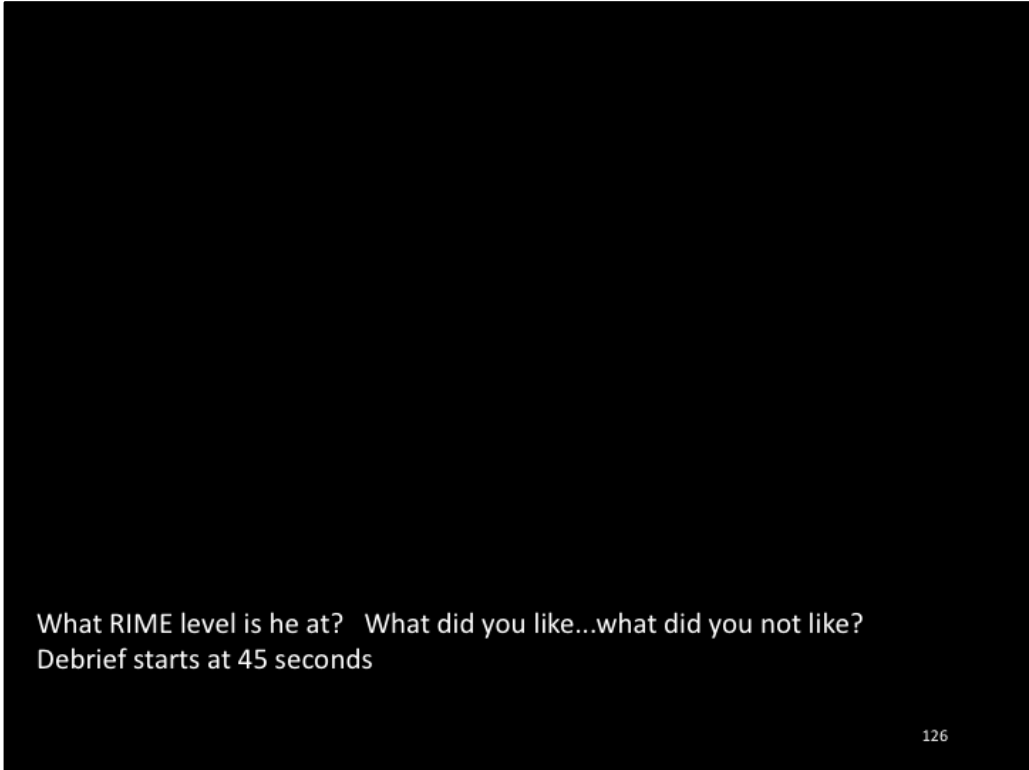
Incomplete feedback (asked about planning, collaborating before hand, planning for assistance. Also, did not include goals, time frame (GNOME)

R - Reporter

I - Interpreter

M - Manager

E - Educator



Patient presents with signs of cellulitis of the hand, and learner diagnoses the condition quickly, lays out several steps in the plan and leaves.

What RIME level is the learner at? What feedback do you have for this learner?

POSITIVES

Confident in plan, displayed solid clinical reasoning.

NEGATIVES

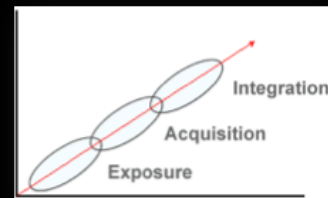
Social and contextual factors weren't considered.
Outlines 5 steps, without giving patient a chance to process, therefore although he had no questions at the end, it might not be because he didn't have any.

RIME

Manager level, not yet at the manager level

RIME Model

- R – Reporter (data only thing mastered)
- I - Interpreter (diagnose/plan from data)
- M – Manager (case from soup to nuts)
- E - Educator (self, colleagues, patient, caregivers)



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This is similar to the Learning Vector model, but has some different elements...also organized as action verbs.

I prefer this often times to the Learning vector because of it's simple and practical lanugage.

RIME Model

Pediatric Case Debrief

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Video 1.04, Pediatric History Taking

In RIME model, he was able to report but in a disorganized way. Because of the lack of organization, he is working in the **interpreter stage** (RIME), and is **acquiring** organizational abilities (learning vector). He is likely not able to manage (RIME) the case or have acquired enough skills to **educate** (learning vector) patients, caregivers, colleagues and self.

How would mentoring at the interpreter/acquiring stages, look different than someone in the reporter/exposure phase?

RIME Model

Pediatric Case - Analysis

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1.05 Debrief Pediatric History Taking

DID WELL

Took time to sit down and have an intimate conversation in a quiet place
Feedback was specific

COULD IMPROVE

Disconfirming feedback, the learner felt like he understood the patients story.
Mentor was directive. Was the learner involved in the GNOME (goals, needs, objectives, method, and evaluation?)
May need to extract from them what they think went good or bad, so that retention is enhanced

Mentoring Reflection

1. What are you doing well in your verbal and written communication?
2. Are you too involved, or not involved enough?
3. Is your feedback specific enough to be usable?
4. Is it generalizable enough to apply to various patients? Helping them see trends?
5. How well are you calibrating your mentoring based on their stage of development?
6. How do you follow up with your suggestions for change?

TJC Mentor Grading Form

Mentoring Feedback Form

putting it all together

HEADERS
PRACTICE DIMENSIONS
GRADING SCALE
SUMMATIVE FEEDBACK
MENTORING RESOURCES

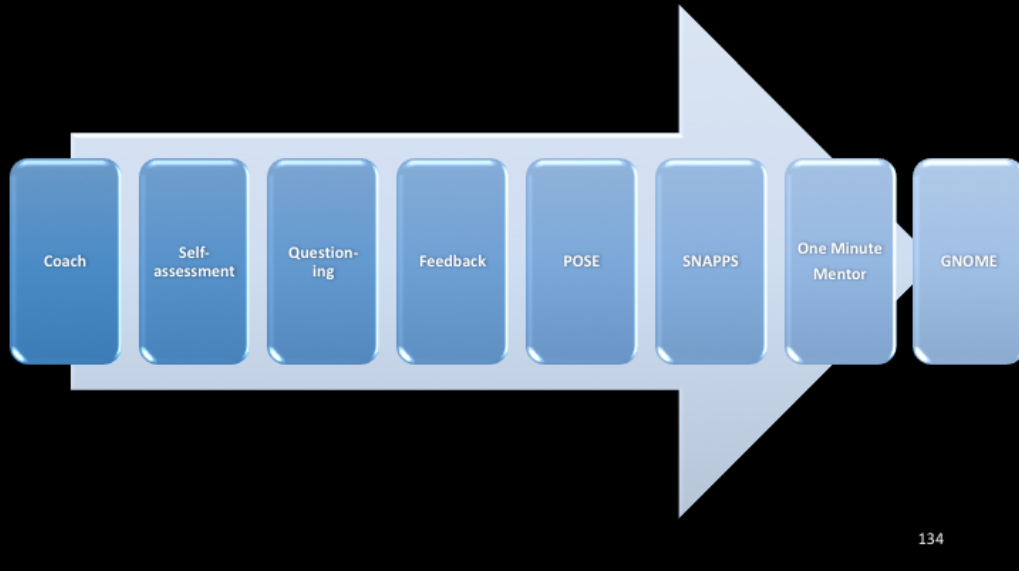
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How does all of this theory translate to real life mentoring? The residency has attempted to integrate this into his mentoring documentation. Please refer to the grading scale in the Mentoring Feedback Form.

CLINICAL REASONING FORM

- This was created in Adobe, and is usually best viewed with the most current version of adobe acrobat (do not view/use within a web browser or with another PDF reader)

REVIEW: What “METHODS” can you use as an mentor to nudge your learner towards Expert?



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Feedback
POSE (preview, observation, evaluate,

Video Example 1

Margaret and Patti

16:35 - 19:40 (cervical spine mobilization)

- Environment
- Scaffolding
- One-Minute Preceptor
- Teaching style
- POSE (apprentice)

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Environment

Laughing/light hearted, Patti is smiling, Eye contact and non-verbals excellent

Atmosphere Margaret is comfortable offering up insights (environment)

Leading question (could be more open ended)

Scaffolding

Integrating Goggles course/tying together curriculum

One-Minute Preceptor

Get a commitment

Margaret says she intentionally chooses light grades first as a general rule

Leading question (could be more open ended), but still a question

Teaching general rules

be aggressive when patient presents with low irritability, especially when condition is chronic

Getting a commitment on using combined planes to enhance outcome

Reinforce what was done right

Yes!

Questioning

Why choose intensity of manual therapy?

Broadening question about matching intervention to stage of condition and irritability!

Teaching philosophy

Conversation is more cognitivist/behaviorist with a flavor of constructivist

Role modeling/apprentice (POS)

Patti **previewed** what she wanted to discuss, **outlined** her thoughts/**shared** her reasoning. Perhaps didn't **evaluate** heavily?

Video Example 2 Margaret and Patti

- 19:40 (type I and type II) – 23:52
 - Reinforce what was done right
 - Leading question
 - Illness scripts/Pattern recognition
 - Get a commitment (group dysfunction)
 - Learning Philosophy

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Patti is trying to get something out of Margaret, and Margaret gives a very good answer, it just isn't the one that Patti was going for.

Video Example 3 Margaret and Patti

- 28:00 – 29:18 (ice vs. heat)
 - She got a commitment through QUESTIONING
 - Reinforced what was done right (even though she disagreed)
 - Taught general rules

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Why would you choose ice over heat?

Patti perhaps didn't agree, but she reinforced Margaret's logic,

Ken and Amanda

- (:30-6:10)

- POSE Method
 - linking his infected shoulder experience with her case.
- Building pattern Recognition
- Fear Avoidance Question
 - How did Amanda respond? Did she re-direct or answer the question?
- Pearls about getting patient to relax...internalized by the resident?
- You did a good job with _____ (pain education) and this is why you care _____.
Learner then reflects.
- Interdisciplinary collaboration: mobilize without clear orders.

Erin and Kristen

- Erin and Kristen 2014, video 0003, first 5 minutes

Erin's Mentoring Style

- Environment
- Rapport
- Eye Contact
- Body Language
- Pace of speech
- Pauses between speech
- Forest and/or the trees?

Audio Reflection Example

1. Ethical Realm 1
2. Domains (Cognitive, Psychomotor, Affective)
3. Reflection Style – 1 example (in-on-for)
4. One example of mindful practice characteristic
5. One Minute Mentor for you to reinforce with her
6. Questioning
7. Role model (POSE method)
8. Scaffolding
9. VARK
10. Identify a learning philosophy
11. EBP triad

Kristen Landers, March 2014, Dropbox

Course Pearls...In summary

- Orientation is harder & more important than it sounds, do it well!
- Entrustment and psychological safety are critical
- Knowledge, Competence, and Expertise are different
- Mentor in all practice dimensions and work on all KSABs
- Leverage learning and problem styles when possible, but use all styles and senses at your disposal
- Intellectual humility
- Narrative /Inductive Reasoning is often under emphasized
 - Dialectic
- Create, don't wait for the "teachable moments"
- There are various models of clinical reasoning. Focus on the one the resident is ready for/using.
- Ambiguity is not the enemy
- Facilitate habits of the mind
- Ensure learning, not just performance. This requires following up on goals.

Course Pearls...In summary

- Experts may have a hard time explaining WHY they do what they do. Don't be a dinosaur.
- Teaching to the "right answer"
- Not encouraging specific strategies for self-monitoring
- Scaffold building or repairing?
- Don't wait too long for teachable moments

Course Pearls...In summary

- Work on skills for facilitation of:
 - Motivation (preparing resident to learn)
- Not collaborating with past mentoring
- Not being aware of your “hidden curriculum” and the community of practice/learning is often ignored
- Facilitating depth when breadth is needed or

Attendee Pearls

- Point of no return
- Support the community
- Use the student
- FLOW

Mentoring Pitfalls

- Orientation
- Psychological Safety
- Not pushing learner to next stage of development
- Mentor doesn't recognize their own lack of competency
- Hidden curriculum: mentor doesn't mirror ideal behaviors/attitudes
- Mentor doesn't reflect on THEIR mentoring/teaching KSA's
- Communication between mentor <>mentor and mentor<>director is weak
- Allows resident to schedule bda patients (too easy, not participative)
- Working with too many residents

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Too busy

- Concern on the part of the faculty that the data is not objective and based on personal observation
- Lack of knowledge, ability, and comfort to give feedback
- Concern about creating poor rapport between learner/teacher
- Concern about consequences of negative feedback
- Different perceptions: Teachers believe they give feedback more frequently than learners say they received it.
- The culture: Culture of medicine is hierarchical, promoting one-way flow of information from teacher to learner

Teaching Pitfalls

- Experts may have a hard time explaining WHY they do what they do because
- Not giving the young therapist structure for which to accelerate their cognitive skill (Example, ICF model)
 - Tangential thinking vs. Funnel (“what else could it be?”)
- Thinking that “wrong” answers are the fault of the student
- Teaching to the “right answer”
 - Experts must learn how to make judgements in uncertain environments
- Not encouraging specific strategies for self-monitoring
- Starting from scratch, instead of building on what they know
- Waiting for teachable moments, instead of creating them

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Why: Broad and deep background knowledge, you can access swiftly with little cognitive load/effort. To explain why, requires slowing down and heavy cognitive load
Structure:

Wrong answer: perhaps it was the framing of your question.

Right answer: impossible in complex scenarios

Teaching Pitfalls cont...

- Work on skills for facilitation of:
 - Motivation (preparing resident to learn)
- Not collaborating with past mentoring
- Not being aware of your “hidden curriculum”
- Not encouraging comfort during ambiguous situations
- Facilitating depth when breadth is needed or