Learner Centered Approaches in Medical Education

Adding Significance *"From Teaching to Learning"*

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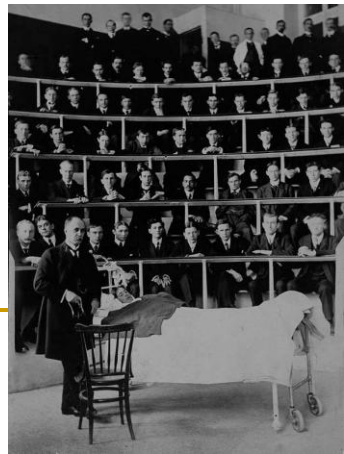
HOFSTRA NORTH SHORE-LIJ
SCHOOL of MEDICINE
AT HOFSTRA UNIVERSITY

Father of Modern Medicine

Sir William Osler ……

“In what may be called the natural method of teaching the *learner* begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end.” 1901

"How can we make the work of the student…practical…? The answer is, take him from the lecture room, take him from the amphitheater — put him in the outpatient department — put him in the wards." 1903



Teacher Characteristics

- Complete Exercise
  - Check or circle 20 words to describe your preferred teaching style
  - Draw a horizontal line across the row under the words
    - **organizes, inquires, manages, facilitates**
  - Count the number of selected words in each group
  - Which has the most? Which the least?

1. Identify expectations for teaching in residency
2. Describe core principles of teaching
3. Describe the principle of coaching and four mastery skills of achieving clinical competence
4. Increase awareness of all learners: teaching is a core skill to acquire

New Yorker Magazine
Annals Of Medicine
Personal Best

Top athletes and singers have coaches.
Should you?
by Atul Gawande

October 3, 2011

"No matter how well trained people are, few can sustain their best performance on their own.
That's where coaching comes in."

Atul Gawande on Coaching

- http://fora.tv/2011/10/01/Atul_Gawande_Do_Surgeons_Need_Coaches - Atul_Gawande_Coaching_and_the_Four_Stages_of_Mastery

- http://www.dailymotion.com/video/xm7yju_atul-gawande-coaching-and-the-four-stages-of-mastery_news

Atul Gwande Article

- Personal Best

The Four Stages of Learning Competence

http://www.businessballs.comconsciouscompetencelearningmodel.htm

- **Unconscious Incompetence** The individual **does not understand or know** how to do something and **does not necessarily recognize the deficit**

- **Conscious Incompetence** Though the individual does not understand or know how to do something, **he or she does recognize the deficit**, as well as the value of a new skill in addressing the deficit. The making of mistakes can be integral to the learning process at this stage.

- **Conscious Competence** The individual understands or knows how to do something. However, demonstrating the skill or knowledge requires concentration. It may be **broken down into steps, and there is heavy conscious involvement in executing the new skill.**

- **Unconscious Competence** The individual has had so much practice with a skill that it has become "second nature" and can be performed easily. As a result, the skill can be performed while executing another task. **The individual MAY be able to teach it to others,** depending upon how and when it was learned.

Teaching when time is limited David Irby (2008)

- Teaching in small increments of time during patient care can provide powerful learning experiences for trainees

- Even small moments of teaching time can offer important learning opportunities to trainees by providing them with new insights and skills that they would not acquire from simply seeing patients on their own.

BMJ 2008; 336:384-387

Why should we teach?

1. Teaching is inherent to medicine: “doctors are teachers”
    1. **The word is originally an agentive noun of the Latin verb *docēre* [dɔ□ ke□ ɾ] *'to teach'.***

2. Students/colleagues/patients benefit from your teaching
    1. ***“The first duties of the physician is to educate the masses not to take medicine. “(William Osler)***

3. Teaching is an excellent way to learn
    1. **(old adage: “you know it if you can teach it”)**

4. Questions help teachers remain current (**“up to date”**)

Outcome project: Six Competencies

Focuses on learner performance in reaching specific goals and objectives in a curriculum

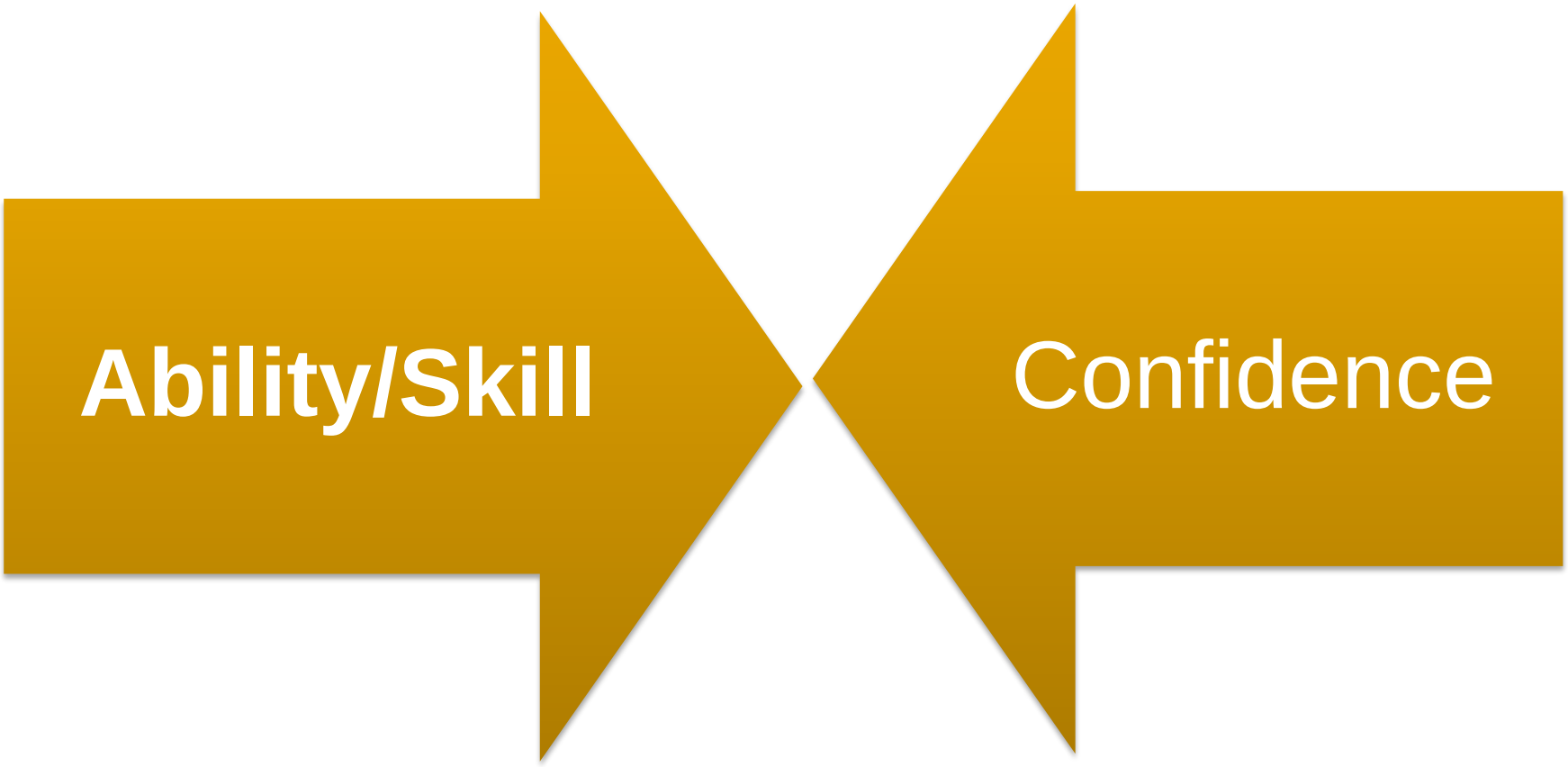
1. **Medical Knowledge**
2. **Patient Care**
3. **Practice Based Learning & Improvement**
4. **Systems Based Practice**
5. **Professionalism**
6. **Interpersonal & Communication Skills**

Practice-Based Learning & Improvement

Residents must be able to:

- ✓ **Analyze, investigate and evaluate their patient care practices**
- ✓ **Perform practice-based improvement activities**
- ✓ **Locate, appraise and assimilate scientific evidence from scientific studies related to patient health problems**
- ✓ **Use information technology to manage information and support their own education**
- ✓ **Facilitate the learning of students and other health care professionals**

Our Goal



Recall a teaching opportunity you engaged in while ……

In the clinic?

In the OR?

On the inpatient ward?

What worked/ did not work?

In the everyday practice of medicine who teaches who?

Intern ⇔Medical Student/Sub-Intern

Intern ⇔ Intern

Resident ⇔Medical Student/Sub-Intern

Resident ⇔Intern

Senior Resident ⇔Junior Resident

Attending ⇔ Resident/Intern/Student

Others/TEAM: Nurses, PA, Patients, Therapists, staff, etc….

Where are Residents Teaching?

On the wards/rounds ***

Clinic ***

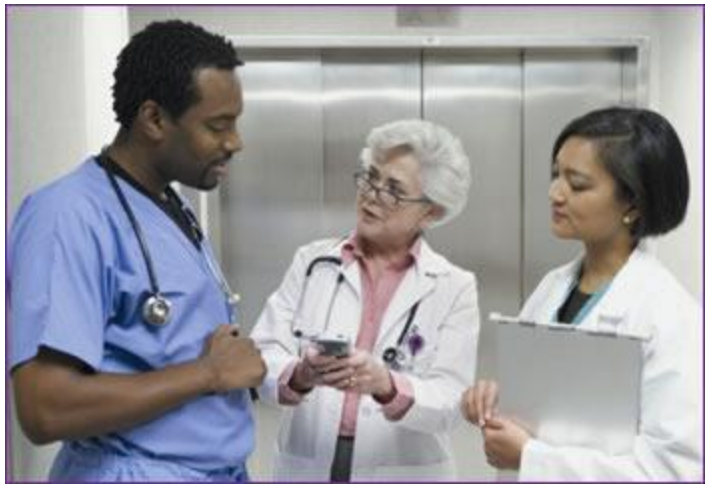
OR***

Lectures

Small group

Research

M&M Conference

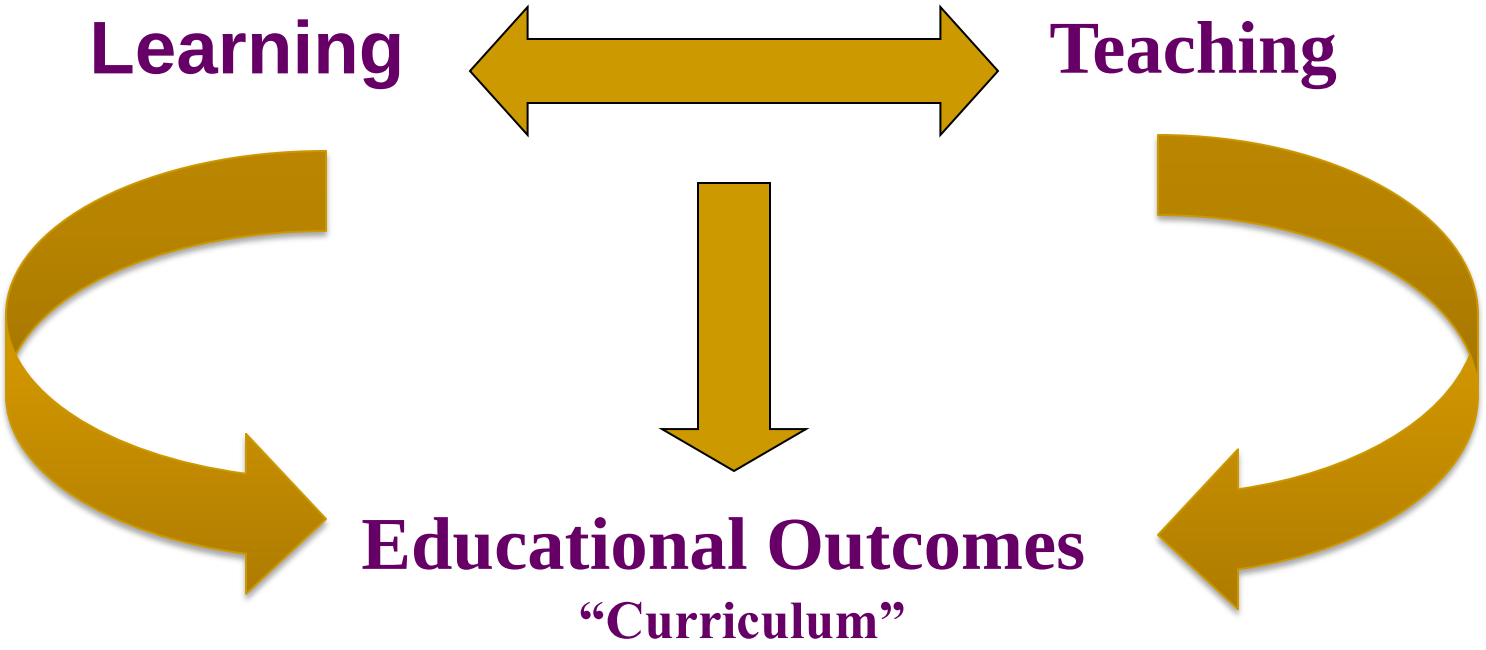


INTRODUCTION TO CLINICAL TEACHING

- What do I need to know to be an effective clinical teacher?
  - What role (s) will I need to ado(a)pt?
  - What attributes do I need to possess?
- What teaching strategies do I need to apply, and in what circumstances?
- How do I know my clinical teaching is effective?

Doctor Video

Institutional Reasons
ACGME: Competency-Based Resident Education



Introduction to Competency-Based Residency Education. ACGME. Joyce, 2006

The Big Clinical Education Picture

- **Knowledge and Understanding**
  - **Didactics/cases**
- **Skills (the doing)**
  - **Clinical care-inpatient & outpatient**
- **Attitudes/Values**
  - **Observation**
  - **Prior experiences**
  - **Role Models/Mentors**

Coach and Clinical Teacher

- Direct Observation (with checklist/data)
- **"Diagnoses" :who is my** learner & needs?
- Allows learner to **self-assess**
- **Role models (knowledge, skills and attitudes)**
- **Demonstrates Care/Debriefs cases (teaching moment)**
- ***COACHES*/Provides feedback**
- Encourages learner **reflection** (cognitive process)
- Provides direction for future practice (encourages self directed learning)

CHIEF COMPLAINTS

Hofstra North Shore-LIJ School of Medicine

- First 100 weeks experience

Abdominal Pain
Breast Disease
Lung Nodule
GI Bleeding
Wound Infection
Malignancy for resection
Bariatric surgery
Vascular procedure
Breast cancer
Lung cancer
Colon cancer
Abscess
Abdominal surgery **(*Longitudinal Patient)**
I & D
General or Local Anesthesia **(*Longitudinal Patient)**
Laparotomy
Suturing and suture or staple removal **(*Longitudinal Patient)**
Dressing application

***Patient requiring a surgical intervention (pre-op, op, and post-op visits)**

Principles of Teaching in a Busy Environment

- **Most teaching skills are similar or identical to skills required for *patient care***
- **You can draw on both positive and negative experiences in your *own education***
- **As residents and students are adult learners, the role is more similar to *coaching* than traditional teaching.**

APPENDIX

Teaching is an art…
A good teacher comes prepared to teach and students are prepared to learn

What barriers interfere with resident teaching and learning?

Overcoming obstacles to teaching

TIME

Make it a part of your everyday practice (for yourself and for your learner)

Use "**point of care**" practices as teaching opportunities (connect book medicine with clinical medicine)

Teach in "small bites" (2-3 minutes)

"**Just in time**" – blogs/wikis, emails, log books, assignments,-- f/u with discussions, etc….

Teach your learners to be proactive (minimum one teaching point per session)

Overcoming obstacles to teaching

SKILLS

Teaching is a learning experience, don't be afraid of not knowing something – look it up

(role models self- directed learning)

Ask learner for feedback about teaching

("how can I make learning better for you?")

Institutional responsibility: provide more training on various aspects of teaching

(learning theories, learner/ teaching styles, feedback, etc.…)

What you can to do prepare

Clarify expectations: knowledge, skills, behaviors and attitudes of learners (know learner's rotation goals)

Teach at learners level & ask about their learning preferences

Learn about various teaching techniques

Be aware of your actions as a "Role Model" (attitude, professionalism, patient interaction, etc.…)

Make time for review and feedback (even if just a few minutes)

Things we know…

- Learners remember more when presented with less.
- Learners remember most when material relates to the patient at hand.
- The human adult attention span is 10-15 minutes
- Optimal learning is at 20 minutes into a long lecture
- So, maybe a 10-minute talk isn't such a bad idea!

Elements of the Ten-Minute Talk

- **Cases + Handout + Focus = CHF**
  - ***Cases*** - Patient-focused, short summary cases - "caselets" or ”problems”
  - ***Reference/electronic*** - Always has a resource, which greatly increases retention.
  - ***Focus*** - Focus on common clinical problems that learners are currently encountering. It is limited and is focused content.
- **For successful 10-minute talks...**
  - Highlight key issues and their linkages to the patients you're seeing
  - Relate material to past and future learning..."next time we'll do_____"
  - Genuinely invite comments and then questions
  - Summarize key points

What are the advantages and disadvantages of the 10-minute talk?

Advantages

- If focused on current care, it is probably the most efficient way to learn
- It is quick! Who has time for more than 10 minutes?
- It can involve the whole team - anyone can do a 10-minute talk
- It helps with synthesis and application of material
- The faculty/student ratios are low...so better interaction
- The speaker learns as well!

Disadvantages

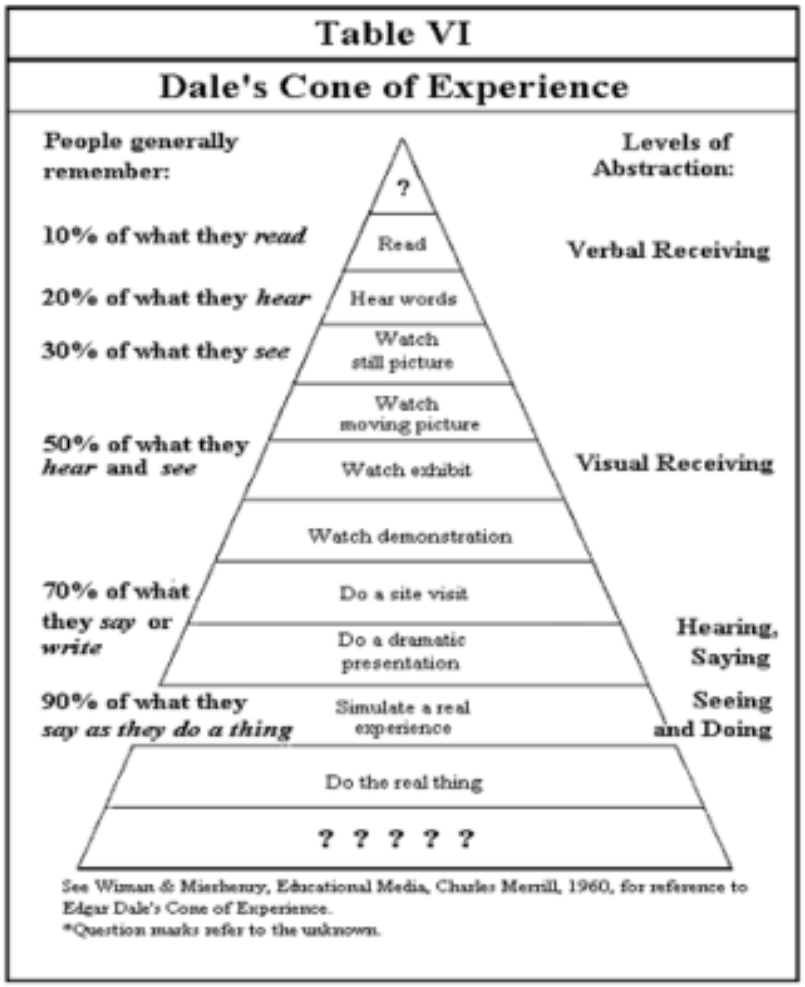
- For passive learners - special techniques are required to enhance retention and the use of information
- The presenter's style and skill
- Distractions: requires a high level of concentration by all
- Harder to do - there is no "fat" in the presentation
- Time!!

How do people remember things?

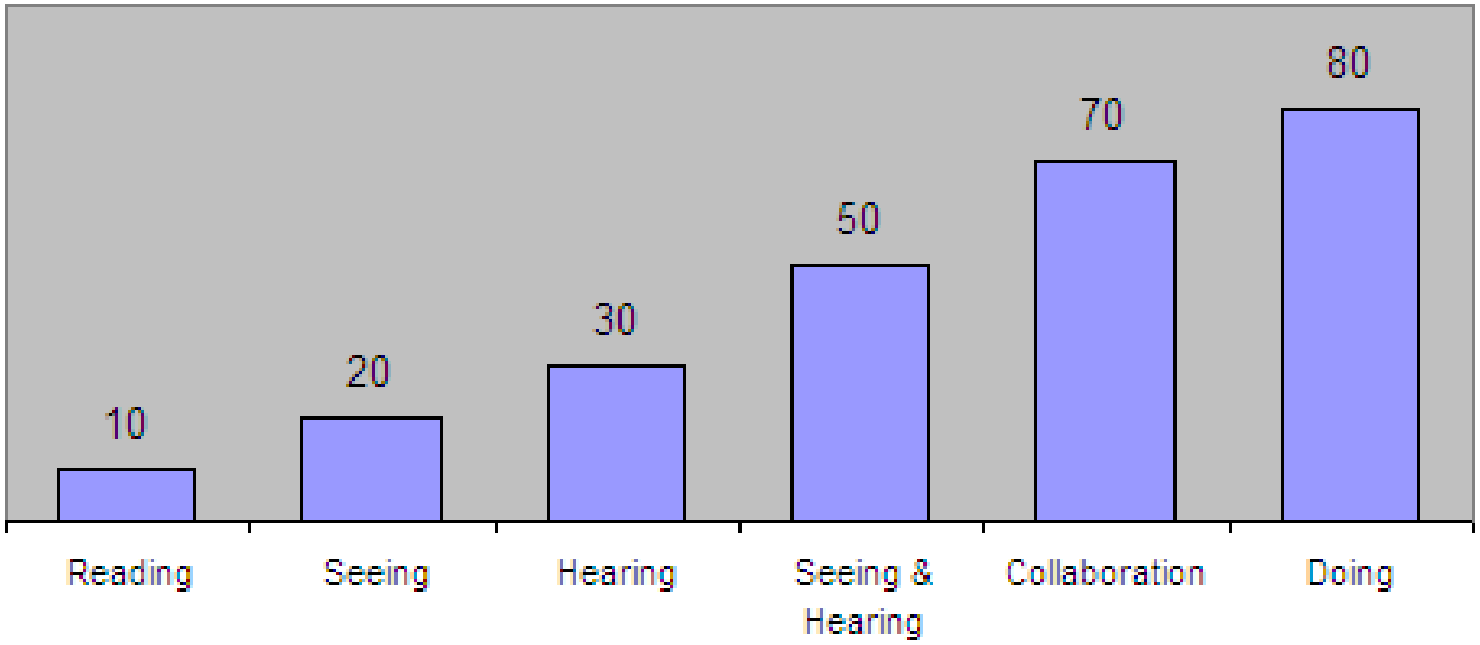
- **People remember what percentage (%) of things they see?**
  - 20%
    30%
    50%
    75%
- **People remember what percentage (%) of things they hear?**
  - 20%
    30%
    50%
    75%
- **People remember what percentage (%) of things they both see and hear?**
  - 20%
    30%
    50%
    75%

Table VI

Dale's Cone of Experience



See Wiman & Mierhenry, Educational Media, Charles Merrill, 1960, for reference to Edgar Dale's Cone of Experience.
*Question marks refer to the unknown.



Chi, M. T. H., Bassok, M., Lewis, M. W., Reimann, P., & Glaser, R. (1989). Self-explanations: How students study and use examples in learning to solve problems. *Cognitive Science, 13*, 145-182.

Quick Facts on How People Remember

- People remember 80-100% of what they apply, especially if used immediately
- Retention is greatly increased by involvement of more senses: audible, visual, touch, writing
- Taking notes (even if never re-read) increases retention by 40%

MILLER'S PYRAMID

Figure 1: Miller's Framework for clinical assessment.
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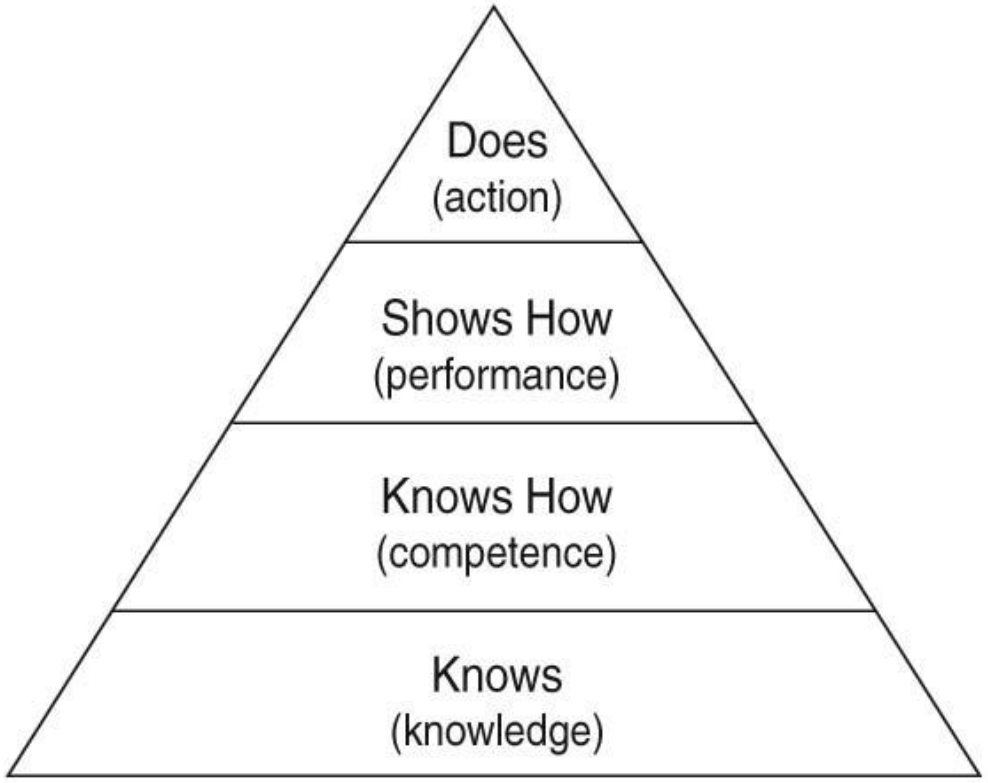

What practices have you developed to overcome barriers to teaching?