Effective & Efficient Learning in a Clinical Environment

John Littlefield, Ph.D. and Brenda Talley, M.D.

Agenda: Effective & Efficient Learning in a Clinical Environment

Goals
1. Describe the evolution of teaching and learning methods in health professions education
2. Recall highlights from your experiences as a clinical student and as a clinical teacher
3. Describe Cognitive Apprenticeship, Evaluation of Clinical Teaching Qualities and R2C2 model of Performance Change
4. Apply new ideas in clinical learning to your home setting

Learning Activities
A. Didactic presentation
B. Reflection exercise & small group discussion
C. Didactic presentation
E. Write an action plan and share it with colleagues

Brief History of Health Professions *

- Early 20th century was a time of change in Medical Education
- Flexner Report (1910) recommended:
  a. Standardization
  b. Integration
  c. Habits of inquiry and improvement
  d. Identity formation
- 20th century – all Health Professions Education became university-based
- Early 21st century is a time of change in all of Health Professions Education


Two 20th Century Problems in Health Professions Education

1. Integrating classroom-based learning with clinic-based learning
2. Helping clinical faculty learn how to provide feedback to students while simultaneously treating patients
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Clinical Teaching Using Cognitive Apprenticeship *

Evaluation of Clinical Teaching *

R2C2 Facilitated Feedback Model *


Past Experiences with Learning in a Clinical Setting

1. Recall a positive learning experience as a student (e.g. a teacher or clinical setting where you learned a great deal). What factors contributed most to your learning?

2. Recall a positive experience as a teacher in a clinical setting. What factors contributed most to student learning?

3. As a clinical teacher, how have you addressed issues such as applying classroom learning in the clinic or providing corrective feedback to students?
Action Plan: Steps to Improve Learning in Your Clinical Setting

1. Describe steps you could take in your clinical setting to apply elements of the cognitive apprenticeship, evaluation of clinical teaching or R2C2 facilitated change model.

2. What constraints or barriers are you likely to encounter?
System for Evaluation of Clinical Teaching Qualities

<table>
<thead>
<tr>
<th>Learning climate</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>L1. Encourages residents to participate actively in discussions</td>
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<td>L2. Stimulates residents to bring up problems</td>
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<td>L3. Teaches residents time management</td>
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<td>L4. Keeps to teaching goals; avoids digressions</td>
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<td>L5. Motivates residents to study further</td>
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<td>L6. Stimulates residents to keep up with the literature</td>
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<td>L7. Prepares well for teaching presentations and talks</td>
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<tr>
<th>Professional attitude towards and support of residents</th>
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<tr>
<td>P1. Listens attentively to residents</td>
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<td>P2. Is respectful towards residents</td>
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<td>P3. Is easily approachable during on-calls</td>
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<th>Communication of goals</th>
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<tbody>
<tr>
<td>C1. States learning goals clearly</td>
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<td>C2. States relevant goals</td>
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<td>C3. Prioritizes learning goals</td>
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<td>C4. Repeats stated learning goals periodically</td>
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<td>C5. Offers to conduct mini-CEX (clinical examination exercise) regularly</td>
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<tbody>
<tr>
<td>E1. Evaluates residents’ specialty knowledge regularly</td>
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<td>E2. Evaluates residents’ analytical abilities regularly</td>
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<td>E3. Evaluates residents’ application of knowledge to specific patients regularly</td>
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<tr>
<td>E4. Evaluates residents’ medical skills regularly</td>
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<th>Feedback</th>
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<th>Neutral</th>
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<th>Strongly Agree</th>
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<tbody>
<tr>
<td>F1. Regularly gives positive feedback to residents</td>
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<td>F2. Gives corrective feedback to residents</td>
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<td>F3. Explains why residents are incorrect</td>
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<td>F4. Offers suggestions for improvement</td>
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2 Boerebach BCM, Arah OA, Heineman, MJ, Lombarts, KM. Embracing the Complexity of Valid Assessments of Clinicians’ Performance: A Call for In-Depth Examination of Methodological and Statistical Contexts That Affect the Measurement of Change. Academic Medicine, Vol. XX, No. X / XX XXXX, first published online
II. Effective & Efficient Learning in a Clinical Environment

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Education in A Clinical Setting

- Very often difficult to combine education of the student with a busy clinic setting
- Particularly challenging to provide feedback to the student both formally/grading (summative) and informally/non-graded (formative)

Structure of Presentation

- Structure/Layout of clinical educational experience
- Actual evaluation process at clinical sites
- Preparation of students for receiving feedback
- Preparation of faculty for delivering feedback
- Educational Alliance

Overall Clinical Educational Experience

- Clinical structure consists of a 6 week rotation for students at various clinical sites: 2-3 students with one faculty (supervisor)
- Supervisor on site that oversees each of the students
- Feedback (evaluation of performance) is both formative (ongoing verbal feedback) and summative (graded and written evaluations)
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Feedback (Evaluations)-Actual Process
For Clinical Sites

A. Summative Evaluations (formal/written)
B. Formative Evaluations
   (1) midpoint evaluation
   (2) daily verbal feedback

Overall Structure

A. Summative—often an evaluation numerically scaled in various domains
   This often includes written comments regarding overall performance at the site

A. Summative Evaluation
   • Utilize OneFortyFive database system at the completion of each rotation
   • 13 domains (distributed under 5 headings) using a Likert scale from 1-6
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Likert Scale 6 Point choices for each domain (example of history taking)

1. Insufficient observation (or not applicable)
2. Often misses essential information
3. Sometimes asks too little history
4. Gets mostly complete & accurate history (expected)
5. Skillfully interviews patient
6. Takes a complete history consistently (usually less than 5%)

13 Domains of Evaluation

A. Patient care/clinical skills
   1. Elicits focused histories
   2. Performs appropriate physical or mental status exam
   3. Diagnostic tests and procedures
   4. Performance of basic technical skills
   5. Clinical reasoning and problem solving
   6. Diagnostic and therapeutic management

B. Medical Knowledge
   7. Fund of Medical Knowledge

C. Practice-Based learning
   8. Self-Directed Learning

D. Evidence-Based Medicine
   9. Evidence-Based practice
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<table>
<thead>
<tr>
<th>13 Domains of Evaluation</th>
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<tbody>
<tr>
<td>E. Interpersonal and Communication Skills</td>
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<tr>
<td>10. Oral Presentations</td>
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<tr>
<td>11. Written Notes</td>
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<tr>
<td>12. Relationship with Patients and Families</td>
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<tr>
<td>13. Relationship with Health Care Team</td>
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**OVERALL PERFORMANCE - 5 POINT SCALE**

1. Insufficient observation
2. Does not meet expectations
3. Needs improvement
4. Meets expectations
5. One of best students ever worked with (5%)

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<thead>
<tr>
<th>Professionalism Scale - 9 Components</th>
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<tbody>
<tr>
<td>1. Honesty/Integrity</td>
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<td>2. Reliability/Responsibility</td>
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<tr>
<td>3. Diversity and Inclusion</td>
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<tr>
<td>4. Compassion/Empathy</td>
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<tr>
<td>5. Self-Improvement</td>
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<td>6. Collaboration</td>
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<tr>
<td>7. Altruism/Advocacy</td>
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<td>8. Appearance</td>
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<td>9. Respect for Profession/Professionals</td>
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**Professionalism Scale**

- This is scaled on a 4 point Likert scale

1. Insufficient observation
2. Does not meet expectations
3. Needs improvement
4. Meets expectations
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Formative Evaluation  
(1) Midpoint Evaluation

- Midpoint Evaluation (half way point of the six week sites)
- Expected face to face interaction between student and supervisor in a private professional setting
- Two page written document with 3 sections  
  (1) areas they are meeting expectations (strengths)  
  (2) areas for improvement  
  (3) action plan for addressing the areas to be improved
- Turned into Clerkship Director

Introduction to Feedback with Students During Orientation

- On the beginning day of the clerkship, as part of the general orientation, a “feedback” discussion occurs

Ten Points to Prepare Students for Receiving Feedback

1. Self assessment-integral part of self-regulation; essential for educational growth
2. Blind spots-blind spots of our abilities that can prevent us from reaching the next stage of growth
3. Connect with Instructors-a positive and healthy professional environment
4. Ask for Feedback-instructors can be guided to directly observe tasks that student is learning
5. Take positive feedback wisely-thank the instructor and be attentive to detail
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Ten Points to Prepare Students for Receiving Feedback

6. Control your emotions—do not take feedback personally, focus is on what needs to be changed not you
7. Start an action plan—evidence of effective listening and concrete goals
8. Acknowledge the generations—knowing how different generations think & work will enhance your success
9. Be specific and ask about general feedback—try to probe deeper and find out actual details of feedback by asking specific questions
10. Be ready! Feedback can be given at any time—it can come in different times and different formats (formal and informal)

Introduction to Feedback Process in Site Meetings with Clinicians

• Face to Face meeting with each site supervisor with sharing of pamphlet
• From pamphlet—we discuss a “safe” learning environment (“safe” = collaborative, student mistakes are accepted, perfection not expected)

Introduction to Feedback Process in Site Meetings with Clinicians

From pamphlet—we discuss:
5-Step Clinical Teaching Microskills

1. Get a commitment
2. Probe for supporting evidence
3. Teach general rules
4. Correct mistakes
5. Reinforce what was done right
Psychotherapy traditionally viewed patient improvement as direct result of interpretations made to patients by therapists. Patients were believed to have transformations in their knowledge, self-concept, & behavior as a result of gaining information about their conduct from the expert observer.

The psychotherapy community came to understand that providing expert insight alone is insufficient to evoke change in patients. Expert insight is provided in the context of a therapeutic relationship & the features of that relationship affect whether the patient experiences positive change.

The shift from dominant importance of the therapist’s interpretations in a therapist-patient relationship parallels a potential shift toward the importance of the supervisor-trainee relationship. Both relationships are similar in that feedback is expected to cause changes in knowledge & behavior.
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Educational Alliance

- Trainees could be expected to form an educational alliance with their supervisor as as patient forms a therapeutic alliance with their therapist.

Educational Alliance reframes the feedback process from one of information transmission (supervisor to trainee) to a 4 Part Process:

1. Negotiation & dialog regarding a shared understanding of performance & standards
2. Negotiating an agreement on action plans
3. Working together to reach goals
4. Co-creating opportunities to use feedback in practice

Model for Optometry Clinical Education?

Optometry colleges could take steps to better prepare students to receive feedback by using an “educational alliance” model.