LESSON PLAN - Module 1 – Introduction to Clinical Teaching

Learning objectives

By the end of this session, participants will be able to:

- Identify learning theory
- Describe the teachable moment
- Describe their teaching style
- Plan ways to improve their teaching style

Lesson Plan

1) Introductions
   a) Orientation to the BEST program
      i) Faculty introduce themselves and explain the logistics of the longitudinal curriculum and its materials: the workbooks, the Schwenk and Whitman text.
   b) Team building exercises
      i) Residents introduce partners with partners' learning goals
         (1) Residents write out three learning goals related to clinical teaching.
         (2) Residents pair up explain his or her learning goals to a classmate.
         (3) Residents introduce each other, describing the partner's learning goals.
         (4) Faculty collect the learning goals sheets and save a copy, giving each resident a copy of his or her own goals.
      ii) Connecting dots or paper-cutting exercises
         (1) Residents work together, solve problems and to get to know one another.
         (2) Any appropriate team-building exercises can be substituted.

2) Teaching practices in a clinical setting
   a) Learning theory
      i) What is learning?
         (1) Learning is not one thing.
         (2) Learning is how we perceive and understand the world around us. It is about making meaning.
         (3) Learning might involve mastering certain methods or techniques or recognition or reasoning or remembering factual information or all of the above.
      ii) Learning theories – There are a number of theories about how humans learn.
         (1) Constructivism. Developed by Jean Piaget, a pioneer in child development psychology. According to this theory:
            (a) We actively create our own knowledge and understanding of the world. To do this, we must ask questions, explore, and assess what we know. Learning is like using building blocks to create a structure.
            (b) Learning occurs by continuous building and amending structures in the brain known as schemata. As new information enters and is understood the schemata changes. If schemata is unchanged – no learning has taken place.
            (c) Often, we see learning defined as a **permanent change**.
            (d) Take aways:
               (i) Learners require an opportunity to ask questions, explore and assess on their own.

(ii) There is no such thing as "temporarily" learning something. If it isn't permanent, we didn't learn it.
(iii) Learners are not a blank slate. When we teach, we are always dealing with existing understandings, however rudimentary or incorrect.

(2) Social Learning Theory
(a) Proposed by Lev Vygotsky and the work of Albert Bandura. According to this theory:
(i) Social interaction plays a fundamental role in cognition.
(ii) The potential for cognitive development depends upon the "zone of proximal development." Skills that can be developed with peer collaboration exceed what can be attained alone.
1. For example: When we learn our first language we do not begin by studying it. We learn by being in proximal range of others speaking that language.
(iii) Most human behavior is learned observationally through modeling. It involves 1) Attention; 2) Retention; 3) Motor reproduction; and 4) Motivation. Since it involves attention, memory and motivation this theory encompasses both cognitive and behavioral frameworks.
1. Where we see a lot of research using social learning theory is in the area of aggression. When children see someone else act out aggressively, they are more likely to do so themselves.
2. Another area built on social learning theory is TV commercials. If we see that drinking a particular brand of beer will make us more popular, we may vary our behavior and start drinking that brand. (or so the theory goes.)
(b) Take aways:
(i) Learning doesn't take place in a vacuum.
(ii) Social and cultural context play a role in learning.

(3) Behavioral Learning is introduced in the 1970's.
(a) In behavioral theory, learning is defined as a permanent change in observable behavior.
(b) Behavior learning theory is used to train animals by rewarding specific small behaviors that lead towards the desired goal. Using this method, a dolphin in a show at SeaWorld, might be taught to perform complex behaviors.
(c) Objectives – The idea of learning objectives is introduced as part of this movement. Sometimes called learning outcomes today, the idea behind learning objectives was that we should be able to evaluate learning by assessing things we can observe. A behavioral learning objective might be something like:
(i) By the end of this lesson students will be able to identify the three main causes of . . .
(ii) We can observe this through a simple multiple choice test. If the student can pick out the three main causes of whatever from that test, we can "observe" that they met the objective.
(d) Another result of behavioral learning theory is student evaluations of teaching.
(i) The validity of these ratings continues to be a subject of great controversy within the education community. Some studies have upheld their validity, and other studies have seen evidence of gender and racial bias.
(ii) There is a strong correlation between student evaluations and grades, suggesting to some that students give higher evaluations to "easy" graders.
(iii)One recent study showed that evaluations did not correlate with student learning. Faculty who had students who did better on objective measures of learning, such as standard assessments and performance in subsequent math courses, did not receive higher evaluations.

(4) In the 1980's cognitive learning theories were introduced
   (a) Teaching strategies focused on helping learners "encode" new knowledge within existing conceptual frameworks.
   (b) Teachers seek to promote a "learning culture" among students.
   (c) Role modeling becomes particularly important in professional training.

(5) Adult Learning Theory aka andragogy
   (a) Proposed by Malcolm Knowles, an adult educator. According to this theory:
      (i) As a person matures he or she becomes **more self-directed**
      (ii) Adults have **accumulated experiences** that can be a rich resource for learning
      (iii) Adults become ready to learn when they experience a **need to know** something
      (iv) Adults tend to be less subject centered than children; they are increasingly **problem centered**
      (v) For adults the most potent **motivators are internal**
   (b) Take aways:
      (i) Adult learners bring a lifetime of experience to the learning environment.
      (ii) Adult learners are motivated by an internal need to know and are self-directed.
      (iii) As educators we have to show the ***relevance*** of what we are teaching.

(6) Experiential learning – or hands-on learning. Proponents are David A. Kolb and Peter Senge. This theory is based on the work of John Dewey, Jean Piaget and others. According to this theory:
   (a) In order to gain knowledge from experience, the leaner needs four abilities:
      (i) The learner must be **willing** to be actively involved in the experience
      (ii) The learner must be able to **reflect** on the experience
      (iii)The learner must possess and use analytical skills to **conceptualize** the experience
      (iv)The learner must possess **decision making and problem solving skills** in order to use the new ideas gained from the experience.
   (b) Examples: internships, job-shadowing, project based learning, etc.
   (c) Reflection is a key part of experiential learning as it turns experience into learning.
   (d) Take aways:
      (i) Experience without reflection does not result in learning.
      (ii) The learner has to be a willing participant in the experience for it to be fully effective.

(7) Surface vs. deep learning
   (a) How would you explain to someone the difference between something you learned that is very surface and something where you have learned it deeply? What's the difference?
   (b) Surface learning = students simply want to complete the task or memorize information.
      (i) Rote learning is a typical surface approach.
      (ii) Students use this style of learning when they see the task as ***externally imposed***. I.e., I have to learn this to pass the test, but I don't really care about it.
      (iii) Facts are learned without any kind of meaningful framework or ability to integrate with existing knowledge.
   (c) Deep learning = student has intent to understand and seek meaning.
      (i) Learner will critically evaluate incoming information.
      (ii) Key is intentionality.
      (iii) Evidence shows that educators who take a student-centered approach (rather than a content-centered) to teaching and learning encourage students towards a deep learning approach.

(d) Take aways:
(i) You can't force learning on someone. They may comply to meet the goal you have required of them, but they won't actually learn the material in any meaningful way.
(ii) Using a student-centered approach helps encourage deep learning.
(iii) Reflection is a key element of deep learning.

(8) Combine
(a) Resident teachers and medical faculty can combine and expand learning theories from past decades to create new approaches to teaching and learning.

b) Video on teaching practice and brief discussion
i) Faculty show a 2-3 minute film clip to facilitate discussion about innovative teaching.
ii) We recommend the scene from Dead Poets' Society in which Robin Williams, as the teacher, is teaching a high school student in front of the class how to write an impromptu poem.
(1) This scene can be used to discuss the advantages and disadvantages of risk-taking in teaching.
iii) Clips from the television comedy Scrubs can also be used, illustrating residents' challenges in teaching medical students.

c) Good teachers/bad teachers exercise
i) Faculty have students brainstorm qualities of great teachers (e.g., "stimulating", "creative", "organized") and teachers needing improvement (e.g., "boring", "too critical").
ii) The class discusses the lists to illustrate how they might improve their own teaching.

d) Review of results on the Clinical Teaching Perception Inventory (CTPI)
i) Hitchcock et al.'s Clinical Teaching Perception Inventory® (CTPI) is available online at no cost.
ii) We recommend that residents complete this online inventory prior to the retreat, print out their results and explanation pages, and bring them to class.
iii) The results/explanations should stimulate an interesting discussion.
iv) Residents share whatever results they feel comfortable revealing.

v) "Student" and resident observer fill out checklist
vi) Detailed feedback using checklist
(1) Third resident teaches case with student
(2) "Student" and resident observer fill out checklist
vii) Detailed feedback using checklist
viii) If trained standardized students are not available, the faculty can serve as standardized students. We recommend that trained facilitators (faculty and/or trained standardized students) help provide the feedback during this first session, to model for the residents how to give truly constructive feedback that is pleasant yet points out areas for improvement.

e) Feedback on practice exercise

3) Closing
a) Large group summary of what was learned
b) Introduction to the next module