Adult Learning and Current Educational Theories for Medical Educators

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Adult Learning Theory
Malcolm Knowles, plus

- A resource full of life experiences and mental models
- Ready to learn when it is immediately needed or relevant
- Practical, like to apply information in context and to problems
- Goal oriented with need to know why, what and how
- Motivated by intrinsic value of learning and personal payoff
- Autonomous and self-directing

Knowles, et. al The Adult Learner (2005);
Merriam SB, Caffarella RS Learning in Adulthood (1996)

Most Meaningful Educational Experience?

Perry’s Developmental Scheme of Young Adult Learning

- Dualism-Received Knowledge
  - right or wrong
- Multiplicity-Subjective Knowledge
  - There are conflicting answers
  - So trust your inner voice
- Relativism-Practical Knowledge
  - All solutions can be supported by reason, in context
  - Can use connected or objective analysis to evaluate
  - Students see the need to choose
- Committed-Constructed Knowledge
  - Integrate knowledge from others with personal experience and reflection
  - Students commit, experience challenges/responsibility, recognize evolving nature of knowledge


Different Orientations toward Teaching/Learning

- Behaviorist
- Cognitivist
- Humanist
- Social Learners
- Constructivist

**Behaviorists**

- Enable learners to change behavior based on external stimuli
- Teacher arranges environment to produce desired results
  - Behavioral objectives
  - Competency based measures
  - Emphasize skill development + training

**Cognitivist**

- Internal restructuring of thought
- Activities guide increased capacity for thought
- Linking new knowledge to old
- Learning to learn, reflection on learning

Objectives, Clinical Skills Curriculum, OSCE/Simulations

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**Cognitive psychology**

- Connect to previous knowledge
- Aid memory, retention, retrieval
- Pattern Recognition
- Forward Thinking
- Hypothesis Testing

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**Miller’s Triangle**

- Performance
  - Competence
  - Know How
  - Show How
  - DO

Miller, GE. Acad Med 1990; Suppl 1: S43–S47.

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**Learner Maturation**

- KNOWLEDGE ORGANIZATION
  - The development of sophisticated problem solving skills involves not only an increase in the number of facts but a change in the way those facts are stored and used.
  - George Bordage, MD, PhD
Focus on thought processes

Case Presentation
Chief complaint
HPI
PE
Labs

Differential Diagnosis
Plan

Social Learning Orientation

- Learning embedded in interactions
- Learners assimilate new info by assuming new roles
- Role modeling, rehearsal and observation
- Deepens learning of how, why + for what purpose

Clinical Teaching, Hidden Curriculum,
Team based Learning

Humanists

- Learning as personal act to achieve full potential
- Needs of person (self-actualization, self-fulfillment)
- Goal: to become autonomous and self-directed

Problem-based Learning, Project Professionalism
**Students manage and assess own learning**

Constructivist

- Knowledge is formed within learners by making meaning from experiences.
- Meaning, understanding, assigning significance
- Changing perspectives, negotiating meaning

“Make this inward journey to leadership, to discover who you are”
Narratives, reflective writing
How do you learn best?

Learning Styles
• Perceptual orientations
• Information processing habits
• Personality

Perceptual orientations
– Visual
– Auditory
– Reading
– Kinesthetic/Tactile

You are helping someone get to the airport. You would:

V: draw a map
A: tell her the directions
R: write down the directions
K: go with her


For Visual Learners

For Auditory Learners
• Learn by Stories, Discussions
• Study by Retelling

For readers/writers
• Learn by
  – Lists
  – Definitions
  – Glossaries
  – Textbooks and detailed handouts
• Study by Rewriting
Kinesthetic/tactile

- Learn by doing, applying, examples, role play
- Study by practice answering, recall applications/field trips

Information processing habits

- Habits - aid in perceiving, thinking, problem solving and remembering
- Types:
  - Abstract generalization v concrete experience
  - Active experimentation v reflective observation

Active experimentation v reflective observation

- Role play
- Simulation
- Problem solve
- Debate
- Discuss
- Questioning
- Learner reaction
- Writing reflection

Personality:
Myers-Brigg Type Indicator, Keirsey Type Indicator

- Affects motivation and ways of valuing experiences
- Axes
  - Extravert/Introvert
  - Sensing/Intuiting
  - Feeling/Thinking
  - Judging/Perceiving

Abstract generalization v concrete experience

- Summaries
- Overviews
- Relate pieces
- Emphasize important points
- Details
- Complete
- Consistency
- Reviewing

When you are at your BEST as a teacher, what is it that you are doing?
Teaching Types

• Teaching Styles (Grasha)
• 5 Perspectives on Teaching (Pratt)

http://teachingperspectives.com/

Anthony Grasha’s Teaching Styles

• Expert — possess knowledge that student needs
• Formal Authority— values knowledge, gives feedback
• Personal Model— teach by example
• Facilitator— guides, directs
• Delegator— allows student autonomy, is resource

5 Perspectives (Pratt)

• Transmission
  – Body of Knowledge to Learners
  – Teacher as expert
  – Cover content, regardless of time
  – Most traditional view of teaching

Pratt, Five Perspectives on Teaching in Adult and Higher Education (1998)

5 Perspectives of Teaching (Pratt)

• Transmission
• Apprenticeship
• Developmental
• Nurturing
• Social Reform

5 Perspectives (Pratt)

• Apprenticeship
  – Enculturation into community
  – Common sense
  – Clear roles, responsibilities
5 Perspectives (Pratt)

• Developmental
  – Learning is changing the quality of thinking
  – Build bridges from learner to content
  – Problem solving

5 Perspectives (Pratt)

• Nurturing
  – Support and encouragement
  – Challenging them in meaningful, achievable ways

5 Perspectives (Pratt)

• Social Reform
  – Vision for reform
  – Explicit stated ideal
Conclusions

- Adult learners, with developmental stages
- Theoretical understandings of T + L
- Learning Styles
- Teaching Types

*Richness of diversity Value of flexibility*

Take Home Points