



## Adult Learning and Current Educational Theories for Medical Educators

Dr. Cynthia Ledford



## Adult Learning Theory Malcolm Knowles, plus

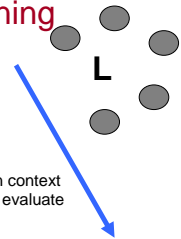
- A resource full of life experiences and mental models
- Ready to learn when it is immediately needed or relevant
- Practical, like to apply information in context and to problems
- Goal oriented with need to know why, what and how
- Motivated by intrinsic value of learning and personal payoff
- Autonomous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

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

## Most Meaningful Educational Experience?

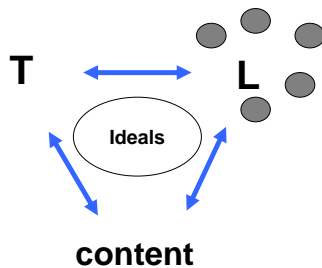
## Perry's Developmental Scheme of Young Adult Learning

- Dualism-Received Knowledge
  - right or wrong
- Multiplicity-Subjective Knowledge
  - There are conflicting answers
  - So trust your inner voice
- Relativism-Procedural 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



<http://www.cse.buffalo.edu/~rapapor/perry.positions.html> (accessed Sept 15, 2008)

Context



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

## Different Orientations toward Teaching/Learning

- Behaviorist
- Cognitivist
- Humanist
- Social Learners
- Constructivist

Torre, et. al. "Overview of current learning theories for medical educators". *AJM* (2006)

## Behaviorists

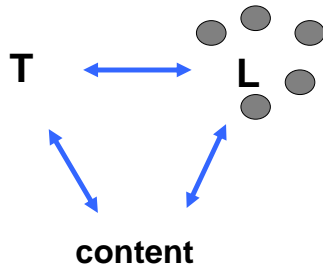
- Enable learners to change behavior based on external stimuli
- Teacher arranges environment to produce desired results
  - Behavioral objectives
  - Competency based measures
  - Emphasize skill development + training

**Objectives, Clinical Skills Curriculum, OSCE/Simulations**

## Cognitivist

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

**Critical thinking, problem solving, CAPSTONE course**



## Cognitive psychology

Connect to previous knowledge

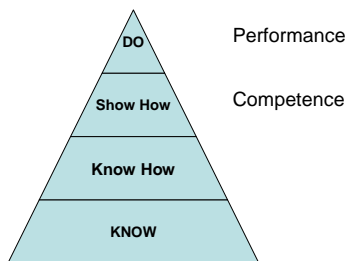
Aid memory, retention, retrieval

Pattern Recognition

Forward Thinking

Hypothesis Testing

## Miller's Triangle



Miller, GE Acad Med 1990; (Suppl.):S63-S67.  
Rethans, et. al. Med Ed 2002; 36: 901-909.

## Learner Maturation

Hypothesis testing

### 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.

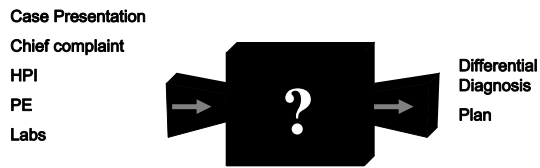
**-George Bordage, MD, PhD**

Pattern Recognition  
Forward Thinking

Novice

Expert

## Focus on thought processes



## Social Learning Orientation

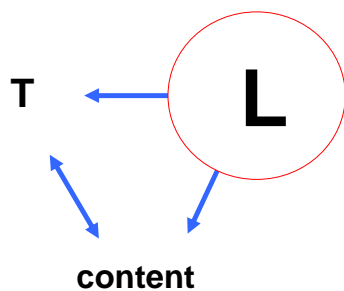
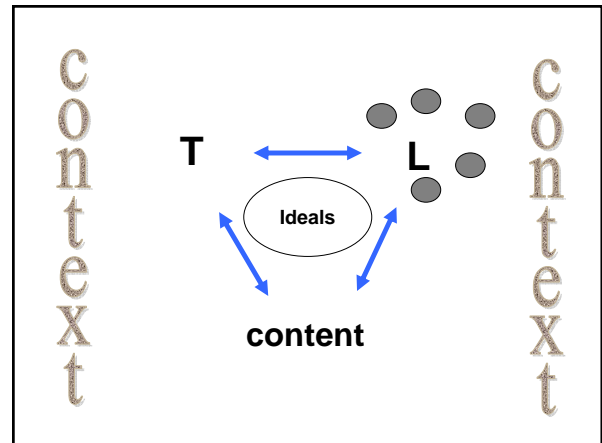
- Learning embedded in interactions
- Learners assimilate new info by assuming new roles
- Role modeling, rehearsal and observation
- Deepens learning of how, why + for what purpose

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

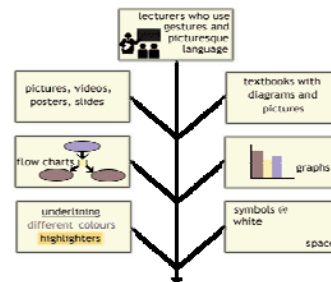
- Knowledge is formed within learners by making meaning from experiences.
- Meaning, understanding, assigning significance
- Changing perspectives, negotiating meaning

"Make this inward journey to leadership, to discover who you are"

Narratives, reflective writing

## How do you learn best?

## For Visual Learners



## Learning Styles

- Perceptual orientations
- Information processing habits
- Personality

## For Auditory Learners

- Learn by Stories, Discussions
- Study by Retelling

## 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

<http://www.vark-learn.com/english/index.asp>

## 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

## Active experimentation v reflective observation

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

## Information processing habits

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

## 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/>

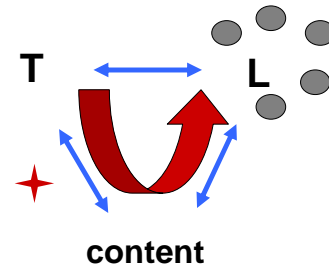
## 5 Perspectives (Pratt)

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

## 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

## Transmission



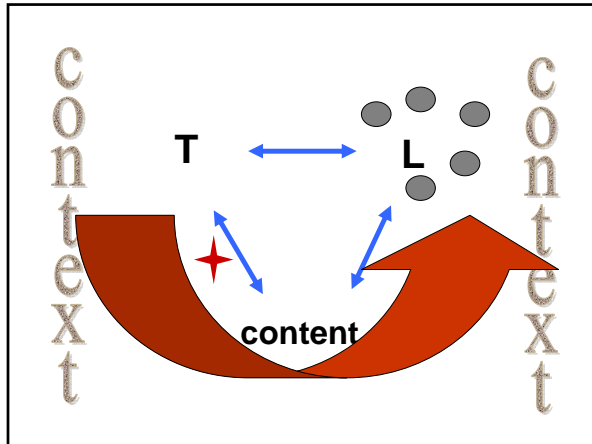
Pratt, Five Perspectives on Teaching in Adult and Higher Education (1998)

## 5 Perspectives of Teaching (Pratt)

- Transmission
- Apprenticeship
- Developmental
- Nurturing
- Social Reform

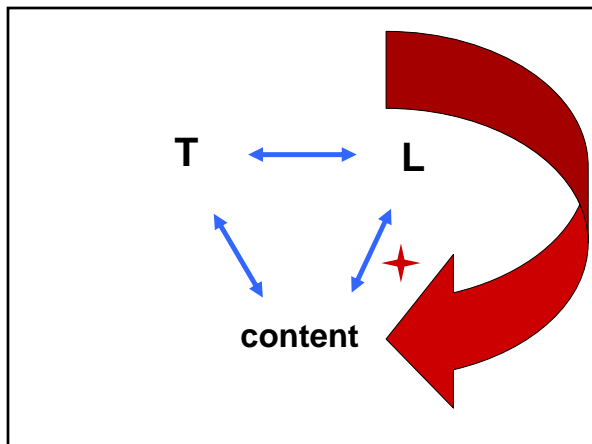
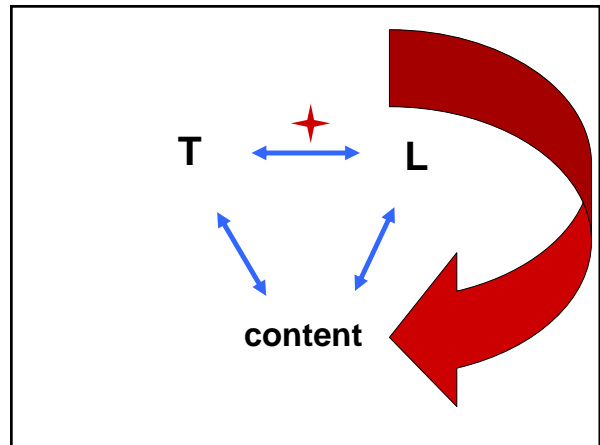
## 5 Perspectives (Pratt)

- Apprenticeship
  - Enculturation into community
  - Common sense
  - Clear roles, responsibilities

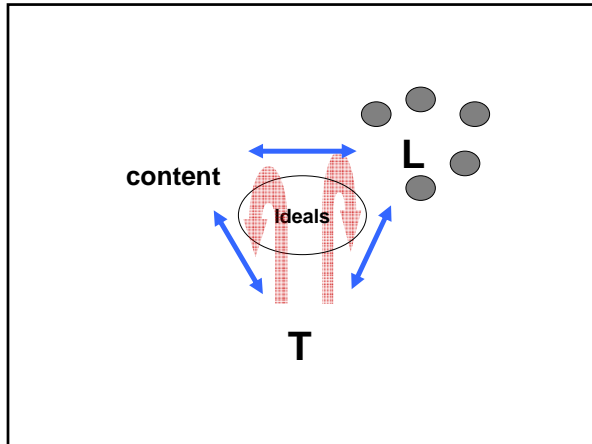


- ### 5 Perspectives (Pratt)
- Nurturing
    - Support and encouragement
    - Challenging them in meaningful, achievable ways

- ### 5 Perspectives (Pratt)
- Developmental
    - Learning is changing the quality of thinking
    - Build bridges from learner to content
    - Problem solving



- ### 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