Modeling the Learning Process

James Zull. *The Art of Changing the Brain*
(Sterling, VA: Stylus Publishing, 2002)
4 Basic Functions the Brain Uses for Learning

- Getting Information
- Making Meaning of Information
- Creating New Ideas
- Acting on Those Ideas
Learner *Begins* as Receiver of Knowledge
Gathering Information Enters through Senses

- Can you remember four things that influence this gathering?
  - Interest
  - Intent
  - Basic Background (prior knowledge)
  - Understanding
Gathering takes place in the sensory cortex
Note Taking

Gathering

• You discovered:
  
• Ways to take notes

• You gathered information by taking notes is class
Analyzing to Make Meaning

REFLECTION

- Try to make personal
- Try to determine connection to past experiences
- Try to discover relevance and usefulness
- Try to discover what it's like that we already know.
Analyzing takes place in the Back Integrative cortex
Note Taking
Analyzing

- You analyzed your notes
- Wrote questions in the margin
- Looked for connections
Creating
Convert comprehension to

• Ideas
• Hypothesis
• Plans
You reflected and reviewed your notes and questions and predicted possible test questions involving higher level thinking skills.
Creating Takes Place in the front integrative cortex
Acting
Testing Ideas

• Writing
• Speaking
• Drawing

• Can you think of other ways?
Acting Takes Place in the Motor Cortex
Note Taking

Acting

• You developed:
  • Summary sheets
  • Maps
  • Power Points
  • Practice Tests
Learner becomes

Producer of Knowledge