Modeling: From Strategy to Culture
Types of Modeling

- Motor
Types of Modeling

- Motor
- Verbal
Types of Modeling

- Motor
- Verbal
- Cognitive

Involves decision making: What to do and what not to do
Theories of Modeling

- Social Learning Theory
- Cognitive Apprenticeship
- Self-Efficacy in Skill acquisition
Social Learning Theory

Often classified as a behavioral theory by psychologists, but for educators, it can be more effective as a cognitive theory.

- People learn through observation.
- Just because it has been learned doesn’t mean behavior will automatically change.
- Internal mental states are essential.
Bobo
Bobo
Just because its learned...

Doesn’t mean behavior will change

What is necessary for reinforcing behavioral change?
Cognitive Apprenticeship

- Cognitive Stage
- Associative Stage
- Autonomous Stage
Cognitive Apprenticeship

- **Cognitive Stage**
  - Learners develop declarative understanding of skill

- **Associative Stage**
  - Mistakes and misinterpretations learned in cognitive stage are detected and eliminated; critical elements are strengthened

- **Autonomous Stage**
  - Skills are honed and perfected, student can model for others
Self-Efficacy in Skill acquisition

- What conditions are necessary?
- How to build self-efficacy?
How to Build Self-Efficacy

“The strongest way of developing a sense of efficacy is through mastery experiences” (Bandura)

- **Mastery Experiences** – succeeding at tasks and not moving on until the student has been adequately successful
- **Social Modeling** – witnessing peers successfully complete a task
Self-Efficacy and Emotion

- **Social Persuasion** – encouragement is crucial; students need direct emotional support for any task; open criticism must be dealt with on a case-by-case basis

- **Psychological Response** – it’s not the emotion that’s important but the student’s meta-cognitive understanding of that emotional response
Internal States

- Students feel cared for
- Students feel they know what is expected of them
- Students trust the instructor and their peers
- Students feel they can express their ideas without being judged for them
- Students admire instructor and see them as a model
Internal States

- Students feel cared for (Caring)
- Students feel they know what is expected of them (Communicators)
- Students trust the instructor and their peers (Knowledgeable, Principled)
- Students feel they can express their ideas without being judged for them (Risk-takers, Open-Minded)
- Students admire instructor and see them as a model (Thinker, Inquirer)
Strictly Academic?

- The Cognitive Stage
- The Associative Stage
- The Autonomous Stage

Learning to identify where a student stands can help target that student’s learning needs.
Strictly Academic?

- The Cognitive Stage
- The Associative Stage
- The Autonomous Stage
More than Academic
School-wide culture

How your school can incorporate better cognitive modeling?

- Teacher concerts, performances, debates
- Teacher-led service projects
- Apprentice programs
- Incorporate respect, kindness, or helpfulness into the mission statement/essential agreements
- Teachers must be aware of the importance of cognitive modeling and how decision-making must be modeled for students to understand

From the research:
- Teachers and older students demonstrate mastery in front of others, engage in social persuasion, and model a healthy psychological response to criticism
Challenges

- **Time**: Academic schedule is rigorous and allows for few modeling opportunities
  - Response from workshop participants: Better practices (such as the above) lead to better efficiency, better self-efficacy, and strong self-drive to excel academically

- **Teacher reluctance**: Teachers do not want to demonstrate in front of students
  - Response from workshop participants: A culture of modeling must be fostered in the school over time
An example: Harkness
...Modeled by teachers in front of school (including post-Harkness feedback among teachers)
Be the Change...

Add rigor to Ghandi’s feel-good mantra. The cognitive science supports it!
Resources and Citations

http://www.edtech.vt.edu/edtech/id/models/cog.html


