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

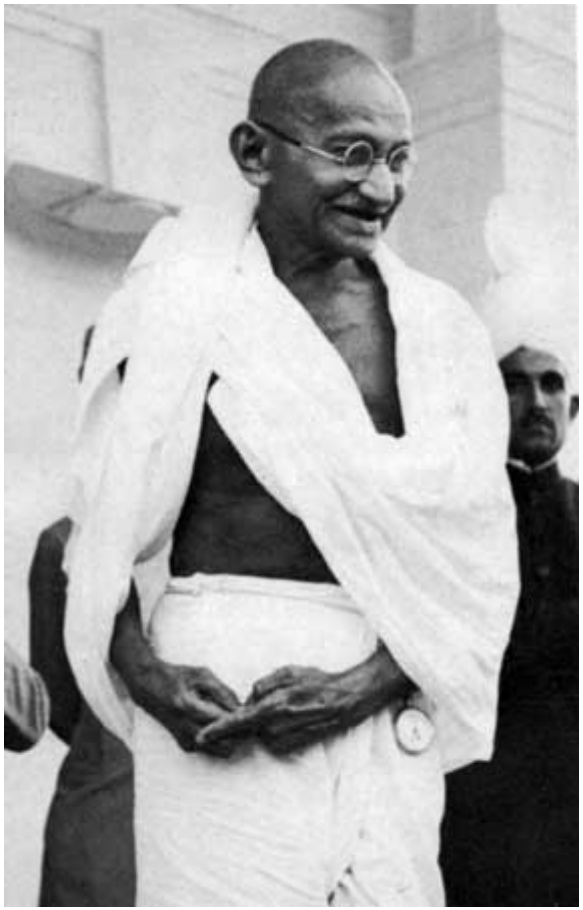
Challenges

- **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

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