

# Overcoming Apathy and Creating Excitement in the Bioscience Classroom



**Effective Learning in the Biosciences**  
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# Design for Learning

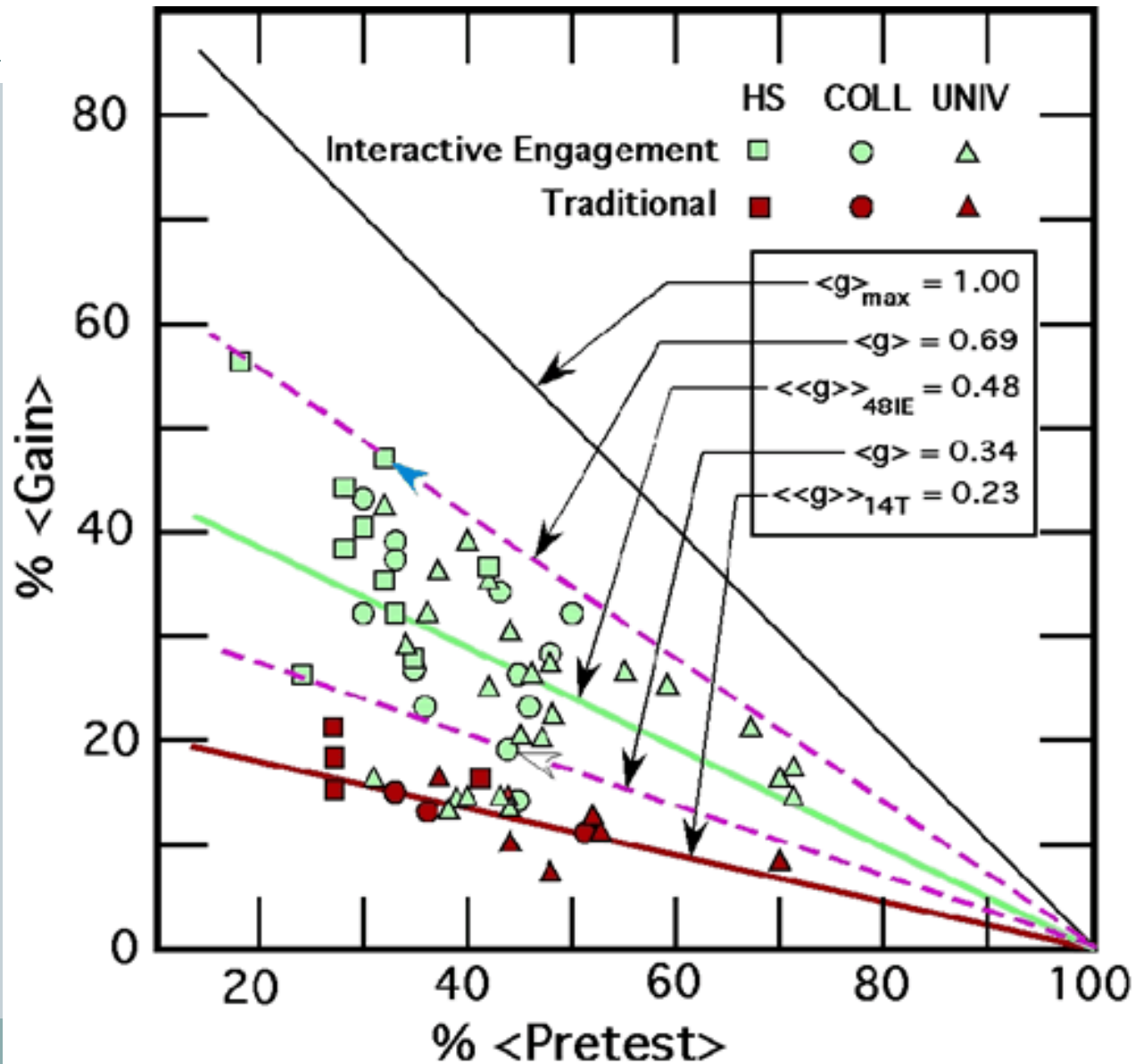


What is your learning outcome?

How will you accomplish that outcome?

How will you know you were successful?

# Hake (1998)





**What behaviors illustrate or are good examples of something an unmotivated student might do?**



**Wilson, Damiani, & Shelton, 2002**

**Attributions drive reality**

# Attribution

How do we describe the “cause” of behavior???

- Internal (dispositional)

- External (situational)



# Attribution



## Power of Misattribution

- Insomnia

Gave pill and told side effect increased heart rate and anxiety

- First Year Students

Statistics on initial struggling

Video of students

# Card passing

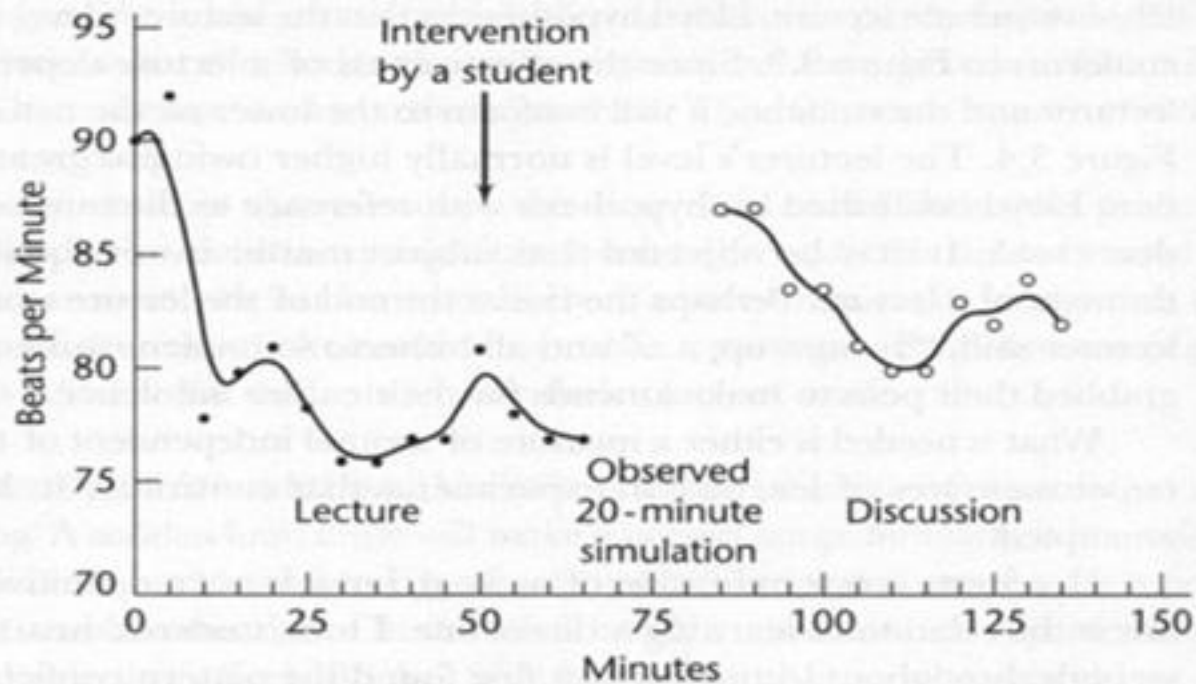


What is one issue or concern you have with respect to your students and creating an effective learning environment?



# Lecture Breaks Increase Students' Attention

FIGURE 3.5. STUDENTS' HEART RATES IN CLASS.



Bligh, What's the Use of Lectures? 2000, p.51.

# Effort vs. Entity



Mueller & Dweck, 1998



mug  
night  
vases  
vector

**gum**  
**thing**  
**saves**  
**covert**

- <http://www.manythings.org/anagrams/>



marching

nameless

licensed

teaching

thickens

**charming**

**salesman**

**silenced**

**cheating**

**kitchens**



host

**shot**

inch

**chin**

fiber

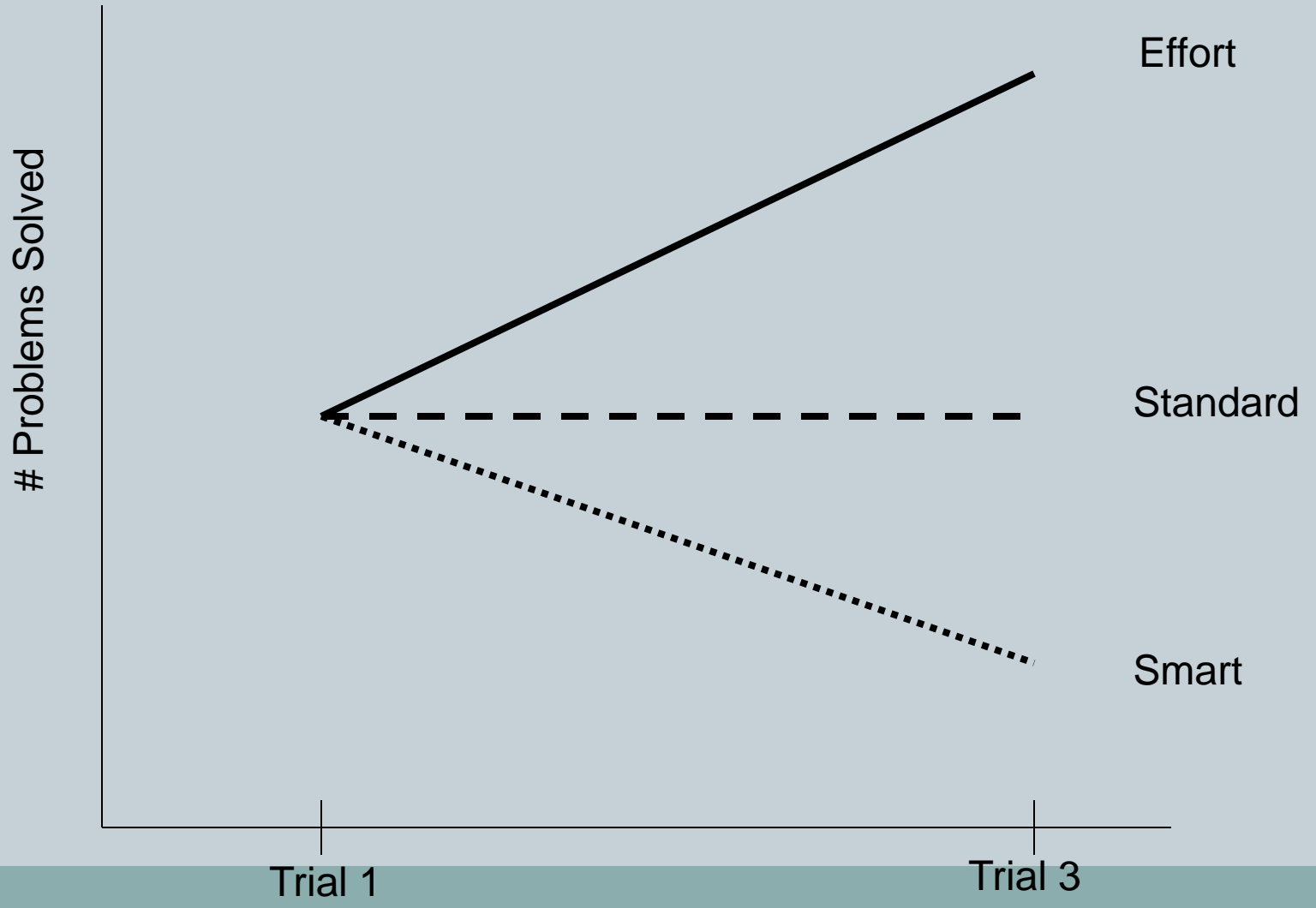
**brief**

glare

**large**

sisters

**resists**

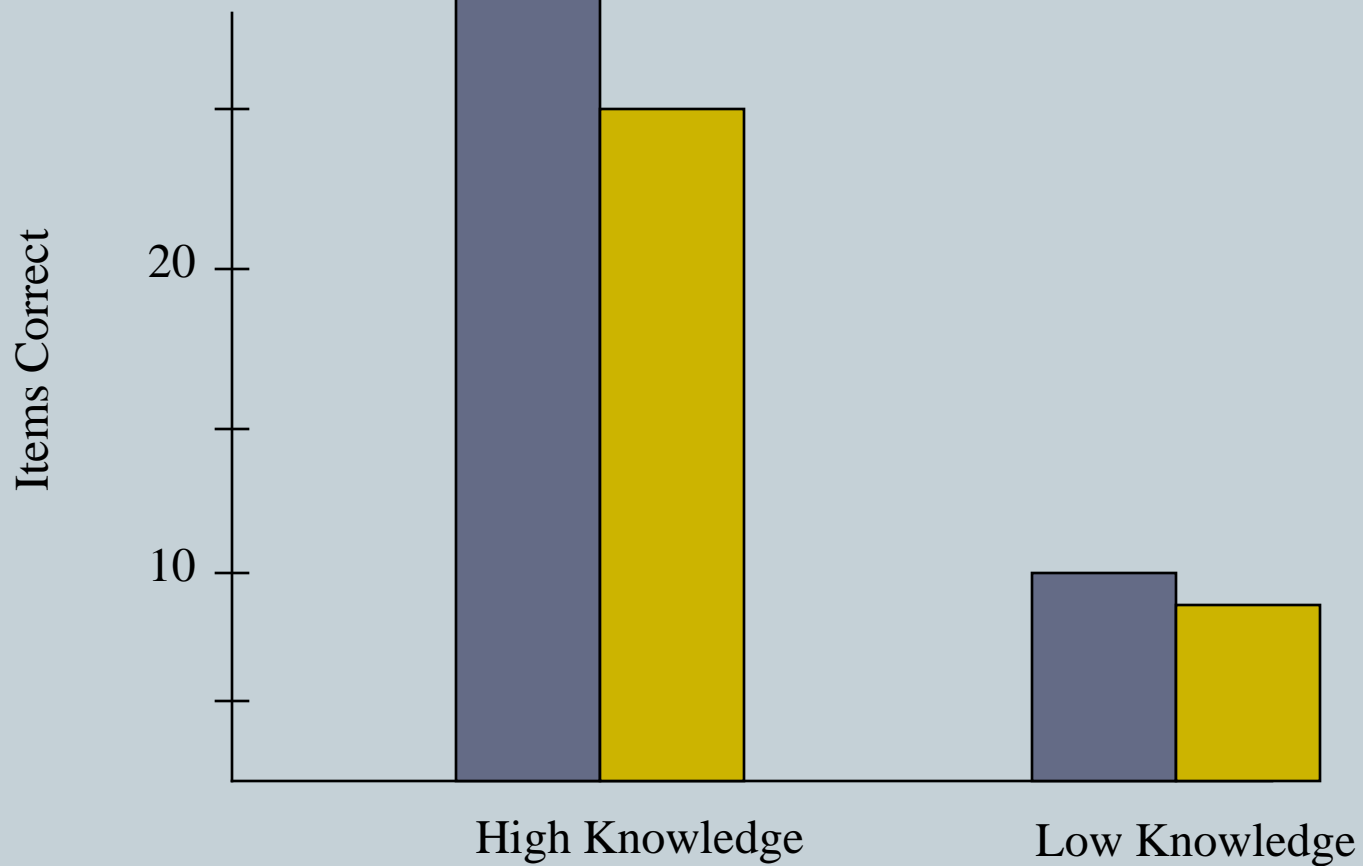


# Recht & Leslie (1988)

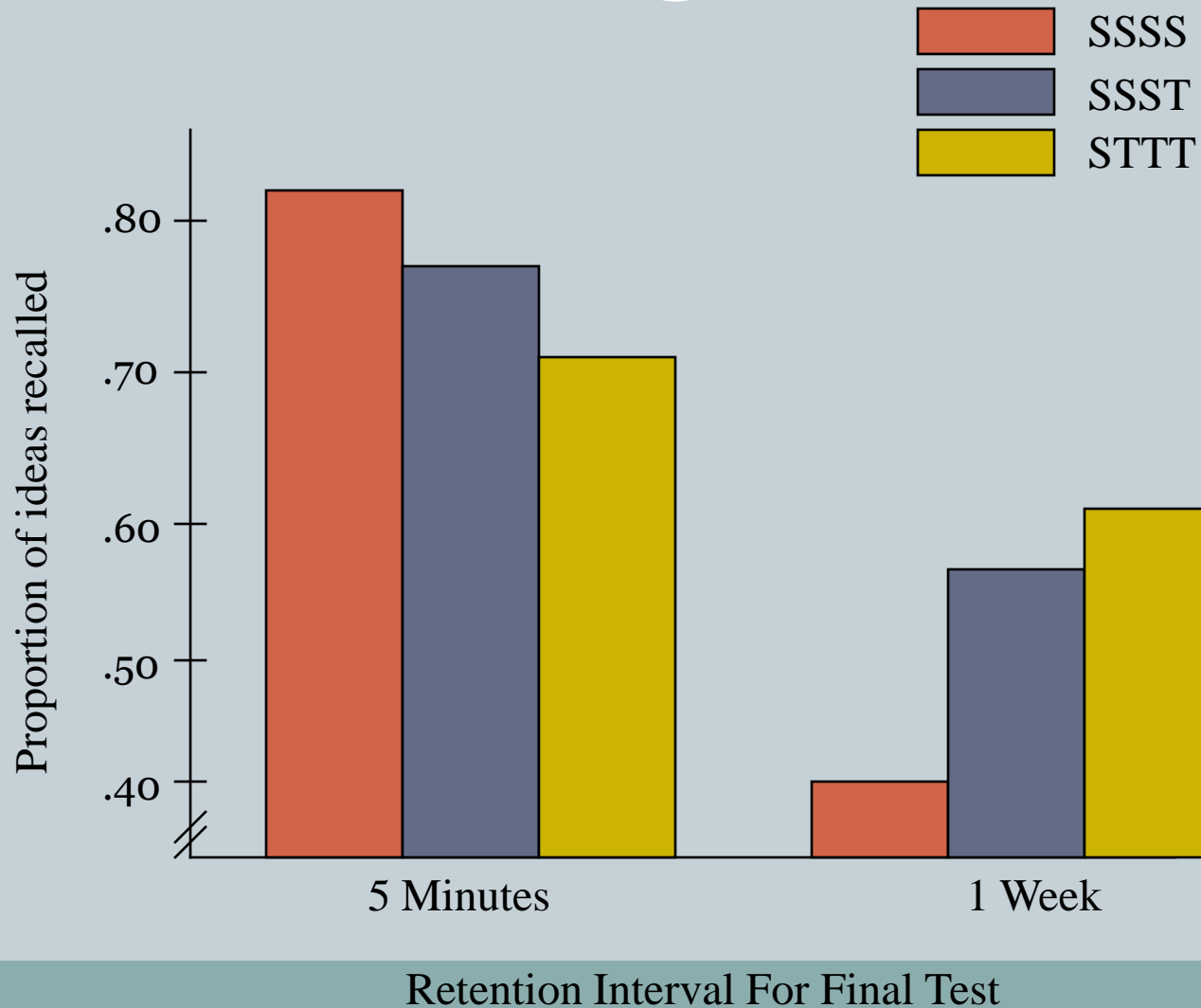


Good Readers

Poor Readers



# Karpicke & Roediger, 2007





# Design for Learning



What is your learning outcome?

How will you accomplish that outcome?

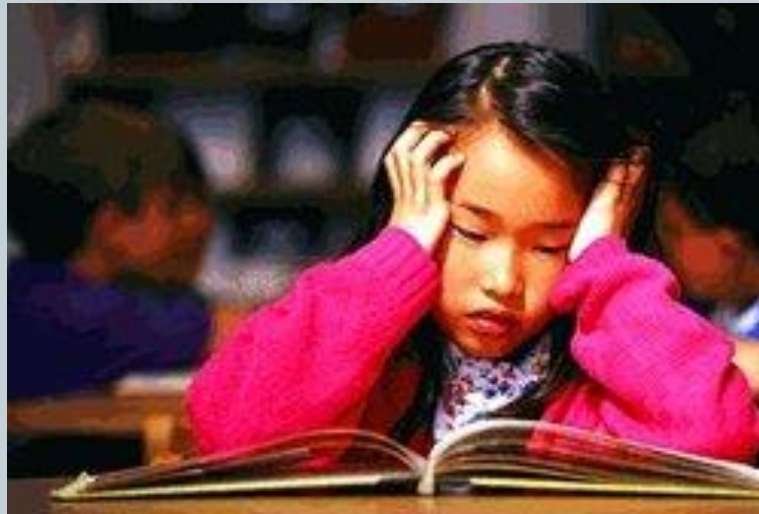
How will you know you were successful?

# Types of CATs



- Minute Paper (check understanding at end of class session)
- Muddiest Point (check understanding at end of class session)
- One-Sentence Summary (check understanding at end of class session)
- Classroom Opinion Polls (check what class thinks)
- Entrance Tickets (good to encourage reading of material before class)
- Lecture Checks (Mazur's Technique)
- Card Passing (very good for sensitive topics)

# Learning Styles



A Nasal Learner Struggles with an Odorless Textbook

From the “Onion”

Search Nasal Learners & Onion

<http://www.theonion.com/articles/parents-of-nasal-learners-demand-odorbased-curricu,396/>



FROM LEWIS BLACK

A ferociously funny take on all things Yule.



NEWS

# Parents Of Nasal Learners Demand Odor-Based Curriculum

MARCH 15, 2000 | ISSUE 36-09

COLUMBUS, OH—Backed by olfactory-education experts, parents of nasal learners are demanding that U.S. public schools provide odor-based curricula for their academically struggling children.

[Enlarge Image](#)



A nasal learner struggles with an odorless textbook.

"Despite the proliferation of countless scholastic tests intended to identify children with special needs, the challenges facing nasal learners continue to be ignored," said Delia Weber, president of Parents Of Nasal Learners, at the group's annual conference. "Every day, I witness firsthand my son Austin's struggle to succeed in a school environment that recognizes the needs of visual, auditory, tactile, and kinesthetic learners but not him."

Weber said she was at her "wit's end" trying to understand why her son was floundering in school when, in May 1997, another parent referred her to the Nasal Learning Research Institute in Columbus. Tested for odor-based information-acquisition aptitude, Austin scored in the 99th percentile.

"My child is *not* stupid," Weber said. "There simply was no way for him to thrive in a school that only caters to traditional students who absorb educational concepts by hearing, reading, seeing, discussing, drawing, building, or acting out."

Austin's experience is not unique.

"My 15-year-old daughter Chloe couldn't sustain her interest in academics and, as a result, she would goof off with her friends and get in trouble," said Michael Sweeney of Oswego, NY. "Now I realize that all those Ds and Fs did not represent any failure on my daughter's part, but rather her school's failure to provide an appropriate

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Dating by ZOOSK



Is attendance required???



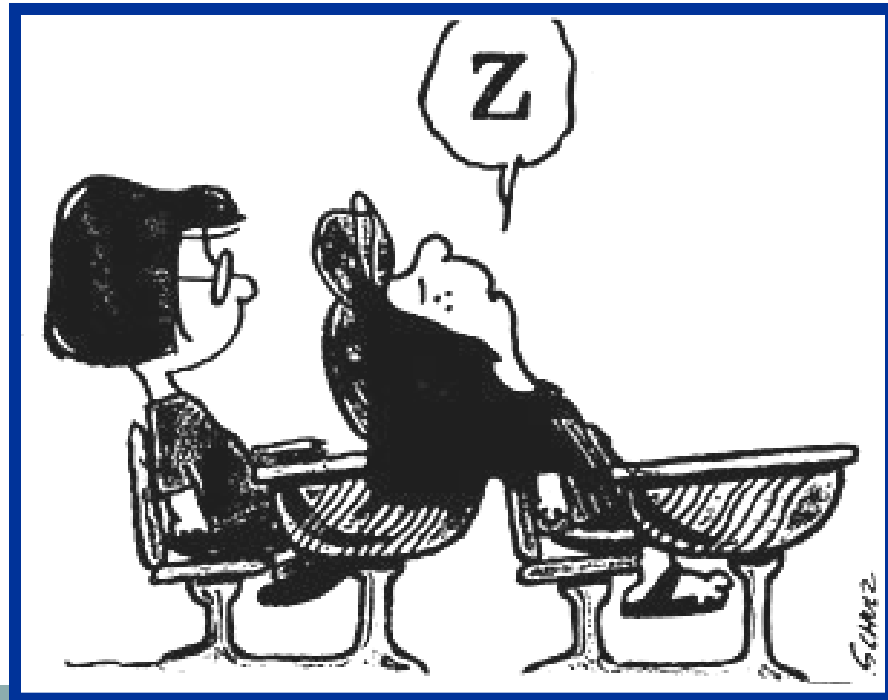
Basketball....



# Myth of Multitasking

# Student Apathy and Boredom

Students report becoming apathetic and bored when forced to listen, listen, listen to information transmitted in nonengaging class lectures

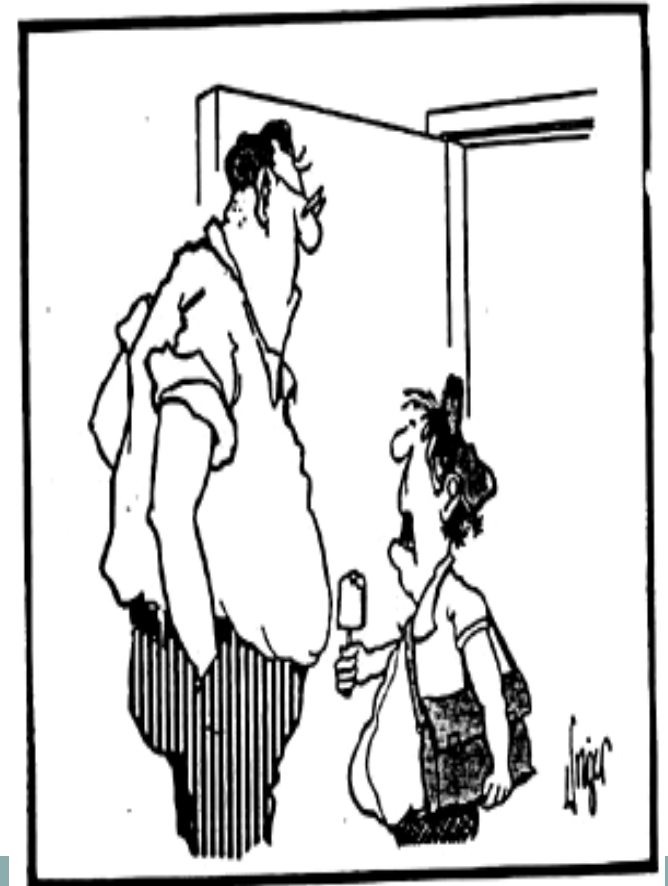




# Student Apathy and Boredom

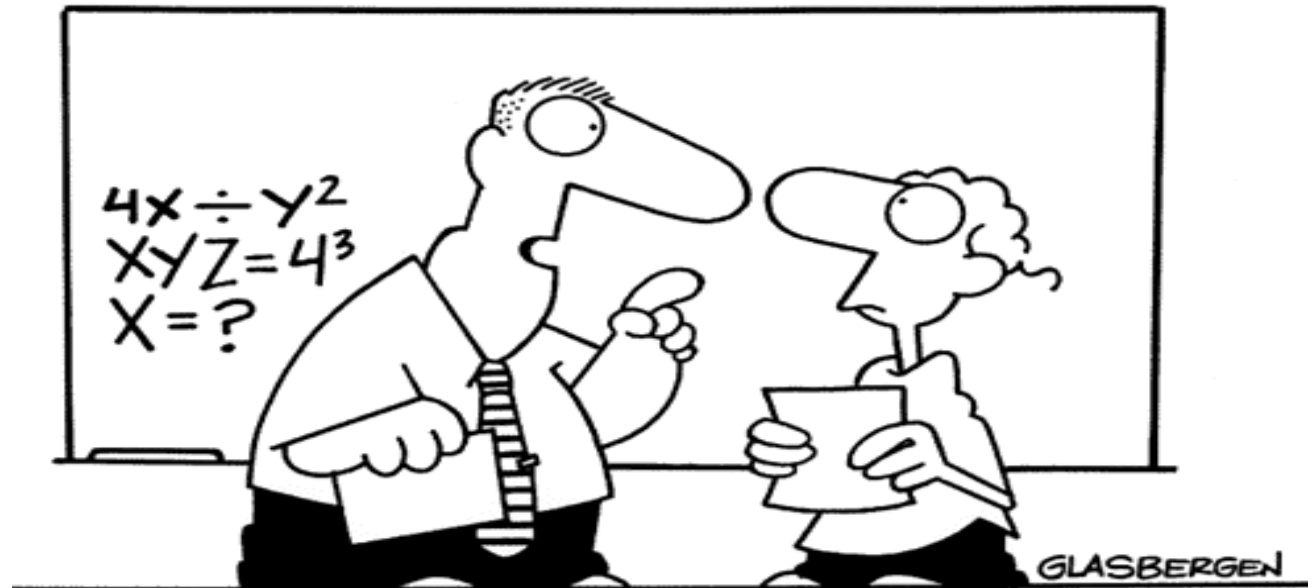
Father: What did you learn in school today?

Son: They don't give us time to learn anything. We have to listen to the teacher all day!



# Student Apathy and Boredom

- Students report becoming apathetic and bored when they fail to see personal relevance in course content



**“Algebra class will be important to you later in life because there’s going to be a test six weeks from now.”**

# Student Apathy and Boredom

Students report becoming apathetic and bored when misunderstanding leads to confusion and poor grades

