Teaching for Better Student Learning: Myths, Evidence, and Tips

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“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn”

Alvin Toffler
The New Science of Learning

Improving teaching without improving learning will not be enough to bring about the kinds of learning improvements that are needed to meet the job demands of the future.
What is This???
What is This???
What is This???
What is This???
Teaching Strategies
Teaching Strategies

Interaction
Hake (1998)
Teaching for Learning

101 Intentionally Designed Educational Activities to Put Students on the Path to Success

Claire Howell Major
Michael S. Harris
Todd Zakrzysk
Metacognition Basics & Examples

Planning to learn
- Scheduling a certain amount of time to study
- Minimizing distractions

Monitoring learning
- Reflecting on study strategies that are working (or not working)
- Quizzing yourself

Evaluating learning
- Connecting new learning to prior knowledge
- Identifying gaps in understanding
Zakrajsek TEDx

Improve learning by thinking about learning | Todd Zakrajsek
https://www.youtube.com/watch?v=tYg3sLcyLB8
Karpicke & Roediger, 2007

Retention Interval For Final Test

Proportion of ideas recalled

SSSS
SSST
STTT

5 Minutes
1 Week
• Entity – fixed, less risk

• Incremental – growth, accepting challenge
86% of students report texting throughout entire class periods. (McCoy, 2013)

Clifford Nass (Stanford), studies social and psychological impacts of media. His research shows that chronic multitasking were terrible at ignoring irrelevant information; they’re terrible at keeping information in their head nicely and neatly organized; and they’re terrible at switching from one task to another.....yet they think they are great multitaskers. (Ophir, Nass, & Wagner, 2009. Proceedings of the National Academy of Sciences)
We are what we repeatedly do. Excellence then, is not an act, but a habit --Aristotle

Long-term potentiation
The mere presence of a cell phone has been shown diminish attention and reduce performance on cognitively complex tasks.  

(Thornton, Faires, Robbins, & Rollins, 2014)
Teaching is the Profession that Makes All Professions Possible

--Todd Whitaker
Learning is the Process that Makes Everything Possible

-- Todd Z.