Universal Threads: Common Components of Didactic Lectures, Flipped Classrooms, Precepting, and Every Other Teaching Strategy

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Nothing to disclose
Active/engaged learning is more effective than lecturing.
Vermont Medical School Says Goodbye To Lectures

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Heard on All Things Considered
Identify the most effective and least effective of the following...
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Lecture
Online
Flipped-Classroom
Problem-Based Learning
Team-Based Learning
POGIL
SCALE-UP
Discovery-Learning
Groupwork
Others????
Groupwork is active.

So all groupwork is good?
WHAT GROUP PROJECTS ARE SUPPOSED TO TEACH YOU

- Communication
- Responsibility
- Collaboration
- Teamwork
WHEN I DIE I WANT MY GROUP PROJECT MEMBERS TO LOWER ME INTO MY GRAVE

SO THEY CAN LET ME DOWN ONE LAST TIME
What could go wrong with group projects?
Strategies to get introverts to talk in the classroom?
Cognitive Load
Sweller 1988

Intrinsic Load – inherent difficulty of the content

Extraneous Load–additional external stimuli

Germane Load – processing of information; construction and automation of schema
What can you do draw attention to the course and information?

What’s your hook?
Learning requires that the learner understand what is being seen or experienced. Prior knowledge is critical in this process – how can that be assessed.
Activating Prior Knowledge

Examples of how you can help learners to activate prior knowledge....
Value/Interest

There must be some value in order for the learner to process the new material.
Long-term potentiation is the physical process by which we learn through repetition.
New information is best recalled when it is connected to other information.
Value/Interest

Understanding

Attention

Elaboration

Repetition

Sleep/H2O/Food

Emotion
Awake, but NOT Learning

Dangers of blue light and melatonin. Proceedings for the National Academy of Sciences (Nov 2014) found that screen time before bed can be detrimental. In addition to poor cognitive functioning, lack of sleep related to obesity, diabetes, and cardiovascular disease. Chronic suppression of melatonin is even related to certain cancers.
Typical Sleep Cycles
Ratey (2008) has shown that exercise increases the production of vital neurotransmitters important for:

- Focusing and Attention
- Motivation
- Patience
- Mood
Food (glucose) --- Complex carbohydrates (vegetables and whole grains) MUCH better than simple sugars
Value/Interest

Understanding

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Emotion
Levels of Concern vs. Degree of Learning

Yerkes–Dodson Law

Simple task
- Focused attention, flashbulb memory, fear conditioning

Difficult task
- Impairment of divided attention, working memory, decision-making and multitasking
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Carol Dweck, 2006

- Entity – fixed, less risk
- Incremental – growth, accepting challenge
I can’t draw...or....I can’t....

Reframe for them to:

I can’t _______ yet.
Universal Threads

**To Learn:**
- Attention
- Understanding
- Value/Interest

**To Remember**
- Repetition
- Elaboration
- Anticipatory Outcome
Teaching is the Profession that Makes All Professions Possible

--Todd Whitaker