

Child and Teen Education and Counseling

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20th Century Education

Adult talks. Child listens. Learning occurs.



Underlying Assumption

Child will understand/remember words, translate them into meaningful concepts (i.e., will learn)

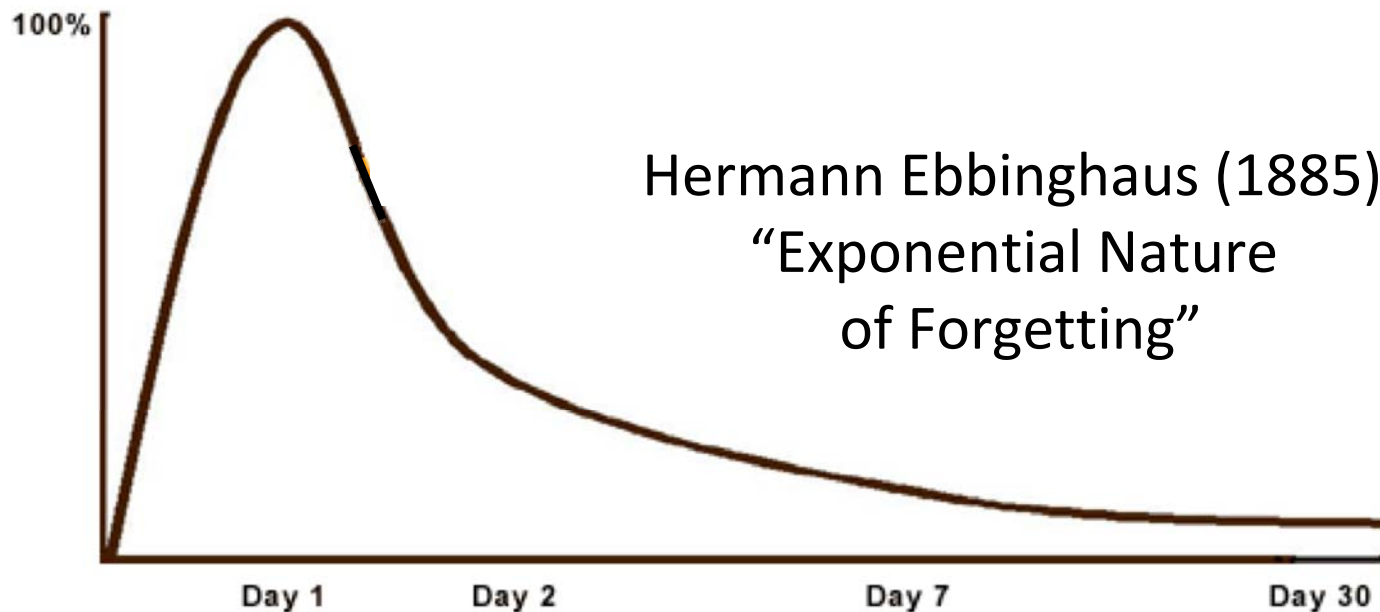


Current Research: Assumption is Flawed

- “Teaching by telling / learning by listening” yields unimpressive results
- Learners who merely listen:
 - Forget most of what was said
 - What is remembered usually not generalized to new situations

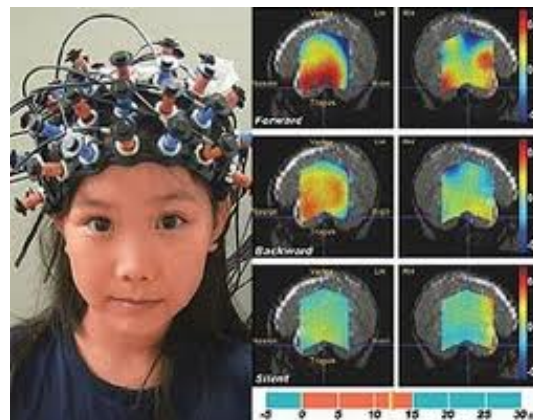
You, for instance ...

- Will forget 90% of what you listened to today within one month
- Most of the forgetting will occur within hours



Merely Listening ...

- Is inefficient
- These days: More to learn
 - Need accelerated learning processes
 - Use what we know about brain activity
i.e., listening + other activity = more learning



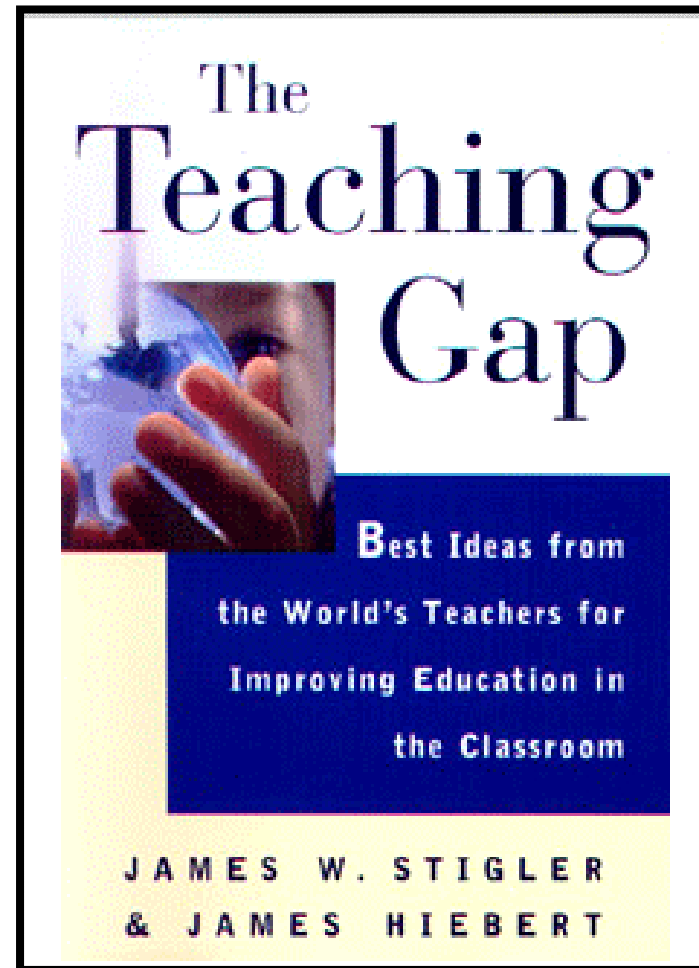
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- Examples of additional activities:
 - Solving personally-relevant problems
 - Discussion
 - Role-playing
 - Conducting research, interviews
 - “Thinking aloud” activities
 - Building, creating, writing
 - “Real world” applications

Example: “Real World” Application

Math teachers in Japan make sure students understand math concept....

.... then walk w/class to a bridge and require students to use concept to explain why the bridge doesn't fall down.



An Example for Audiologists: Teaching How FMs Work

- We talk/child listens:
 - Explain signal-to-noise ratio
 - Explain SNR, provide handout
 - Explain SNR with demonstration



Or We Can Guide:

Place student in role of experimenter



- Question: What problems with HA re: distance, direction, noise?
- Conduct FLE in 4 conditions
 - no HA, HA only, FM only, HA + FM
- What do the data tell us?
- Other classes, situations?

To Enhance Our Educational Efforts ...

- Apply approaches used in patient education, health literacy
 - Info from cognitive psychology
 - Info from brain science

Sources

- Farr, S, (2010). *Teaching as leadership*.
 - Drawn from 20 years of learning from most successful teachers in **Teach for America**
- National Research Council. (2000). *How people learn*.
- Zull, J. (2002). *The art of changing the brain*.
- Zull, J. (2011). *From brain to mind: Understanding cognitive neuroscience to improve learning*.

Cognitive Psychology

- Self-efficacy
- Competency beliefs
- Motivation

Defining Our Terms

(Wigfield & Wagner, 2007)

- Self-efficacy:
 - Belief in one’s ability to control achievement outcomes
 - Not “born smart” (no control over this condition)
 - Can control effort, persistence, concentration
- Competency belief:
 - Self-evaluation of one’s capabilities
 - Directly correlated to motivation; how do children/teens evaluate their capabilities?

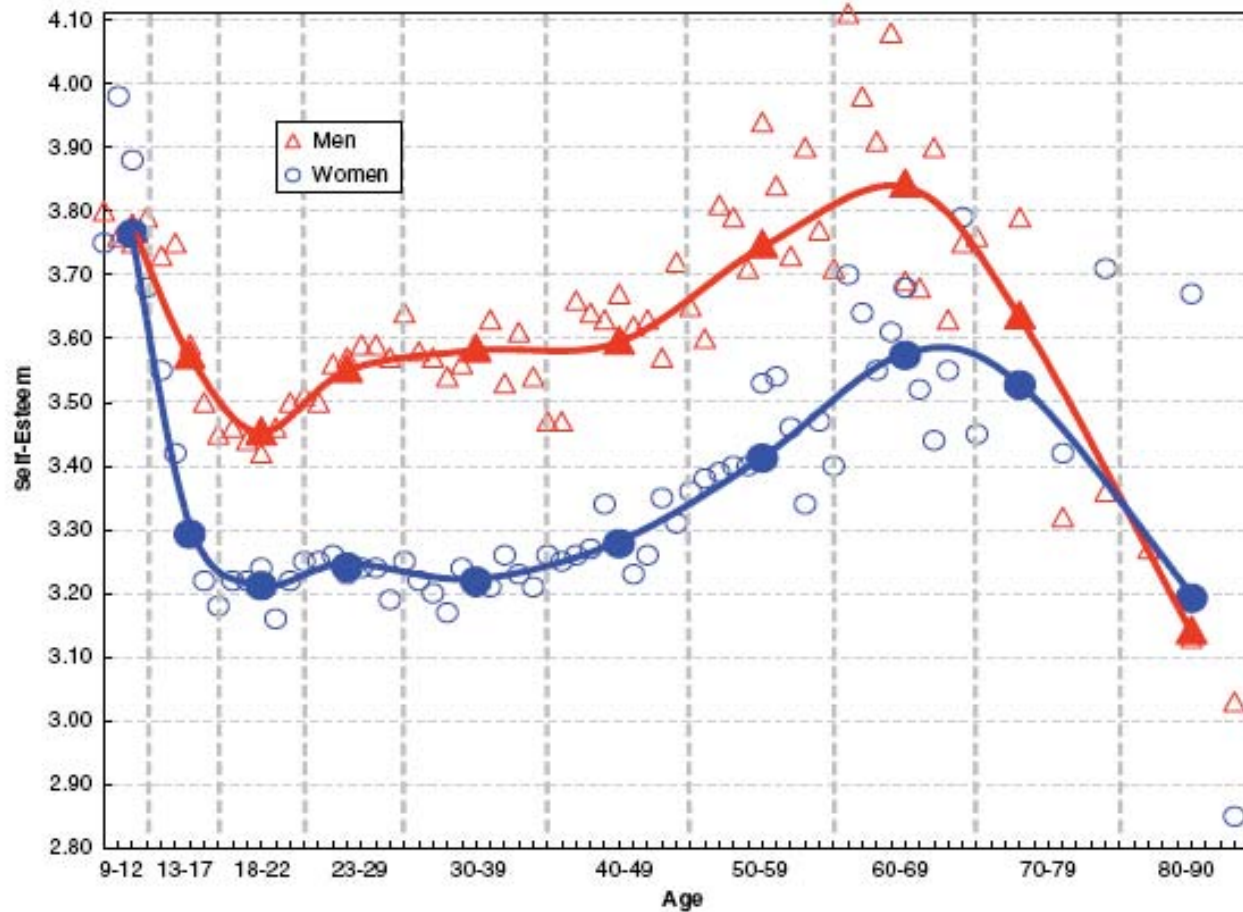


Fig. 1. Mean level of self-esteem for males and females across the lifespan. Also plotted are year-by-year means, separately for males (open triangles) and females (open circles). From "Global Self-Esteem Across the Lifespan," by R. W. Robins, K. H. Trzesniewski, J. L. Tracy, S. D. Gosling, and J. Potter, 2002, *Psychology and Aging*, 17, p. 428. Copyright 2002 by the American Psychological Association. Reprinted with permission.

Single-Item Self-Esteem Scale:

“I see myself as someone who has high self-esteem.”

(N = 326,641)

Children, Teens Will Ask Two Questions:

- 1. Can I learn this information?**
 - Self-efficacy, competency belief

- 2. Why do I have to learn this information?**
 - Motivation

1. “Can I learn this information?”

- WE know “yes”
- LEARNER is skeptical, needs to see evidence
 - Success breeds success
 - Incorporate concept of “small wins”

Small Wins (Weick, 1984)

- Controllable opportunities that produce visible results
- Concrete, complete outcomes of moderate importance
- By itself, one small win may seem unimportant.
- A series of “wins” at small but significant tasks add up!

“Small Wins” Example

(each step matters)

- Question: Do FMs help?
 - Student develops own tool to measure effectiveness (1-5 scale, six conditions)
 - Obtains scale “content validity” from mentor
 - Collects data on self
 - Asks a peer to collect on self, too
 - Uses FM on regular basis in one condition to determine changes over time: listening effort, grades, comfort level

Small Wins vs. “Fire Hose” Approach



Information in “chunks”

- Long known: easier to remember chunks of data (3-4 items) compared to long unbroken streams
 - Phone numbers (Bell labs)
 - SSN
- Another way to break down info: Distributed learning over time
 - Intro, Intermediate, Advanced

2. **“Why do I have to learn this info?”**

- Learner-centered: “Because it’s all about you!”
 - Personally relevant: child’s interests, child’s focus
 - Learning as an “external imposition” doesn’t last

Finding Out What Kids Want to Know ...



Sometimes They Tell Us

- “So am I deaf, or what?”
- “How do you know my hearing is the same every year?”
- “I’m the only one I know who has trouble with cell phones.”
- “I have to go some boring meeting for some boring reason – APE, PIE, IEP. Whatever.”

Sometimes They Don't



“Menu” of options:

- School
- Friends
- Technology
- Sports
- Music
- After-school jobs
- Driving
- Community

Four Easy Pedagogical Steps

1. Find out what child/teen already knows.
2. Share new information related to pre-existing knowledge.
3. Provide something to DO with new info.
4. Revisit, review

1. Find out what child, teen already knows

- Provides us an opportunity to fill in gaps, correct misinformation
- Find out if it is meaningful
 - meaningless info will not be remembered

2. Share new information that connects to pre-existing knowledge

“You already get A and B – the next thing is C”

3. Provide something to DO with new information

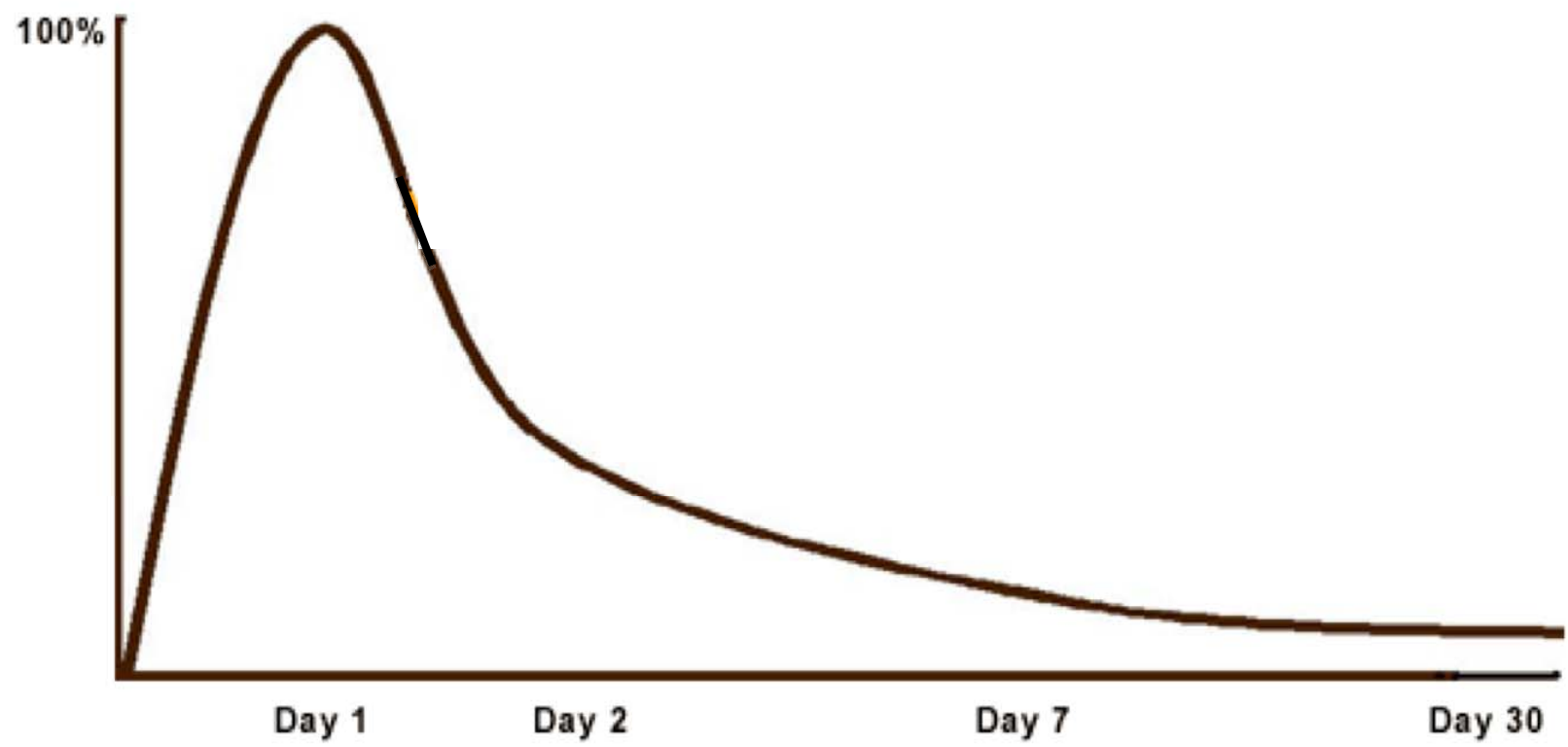
- “You are likely to forget this without additional steps. What would help you remember C best?”
 - Write down what you understand, bring it back
 - Describe to favorite teacher, ask for more help
 - Tape-record a summary for self
 - Research further on Internet, bring back info and explain
 - Build, interview, draw, record

Consequence:

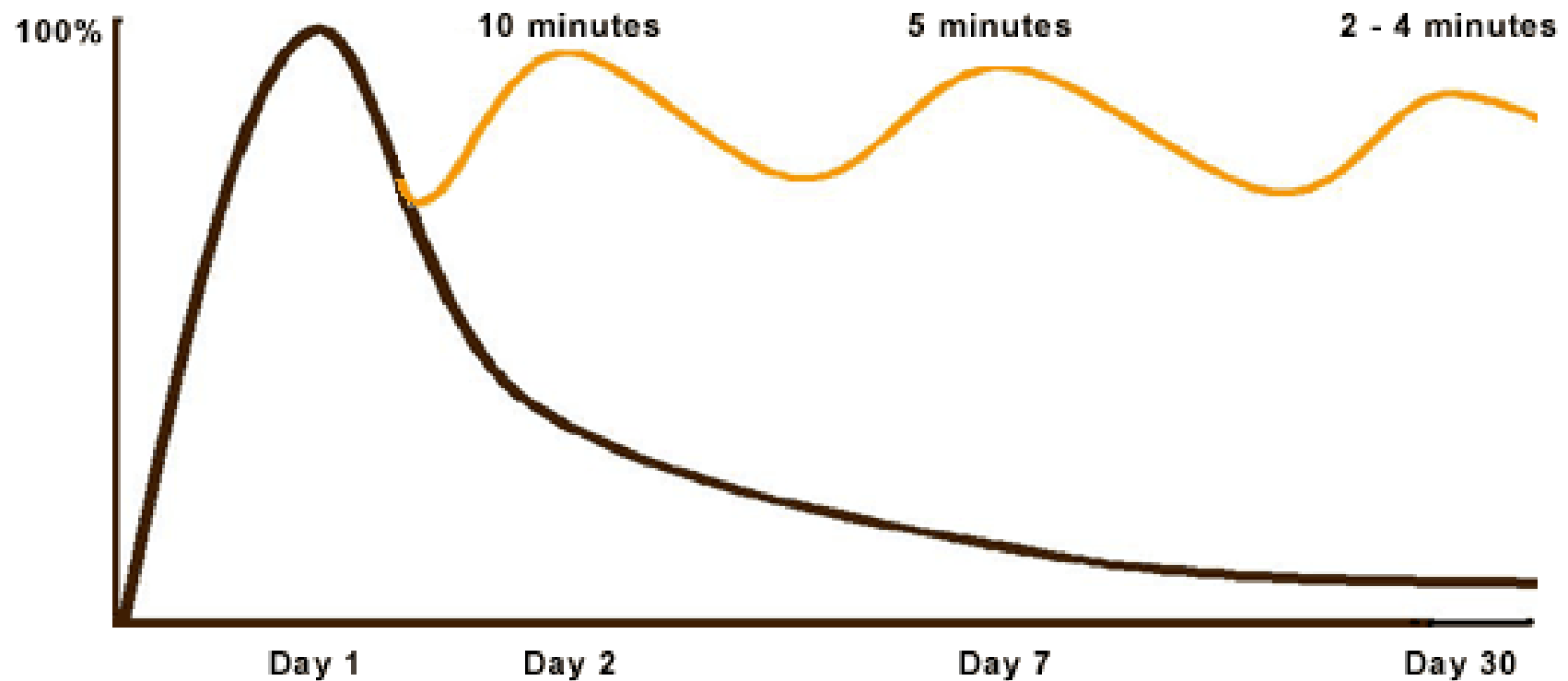
- Learner connects new information to previously known information (Suter & Suter, 2008)
 - Helps learner remember new content longer
 - Helps learner apply new content to novel situations

4. Revisit, Review

- Learning requires cumulative practice
- Repetition based on active recall (esp. spaced repetition)
- Active recall consolidates long-term memory.



Forgetting Curve vs. Learning Curve



<http://www.adm.uwaterloo.ca/infocs/study/curve.html>

Ebbinghaus Goes Digital

Ebbinghaus 3.3

An app to “help you learn new stuff”

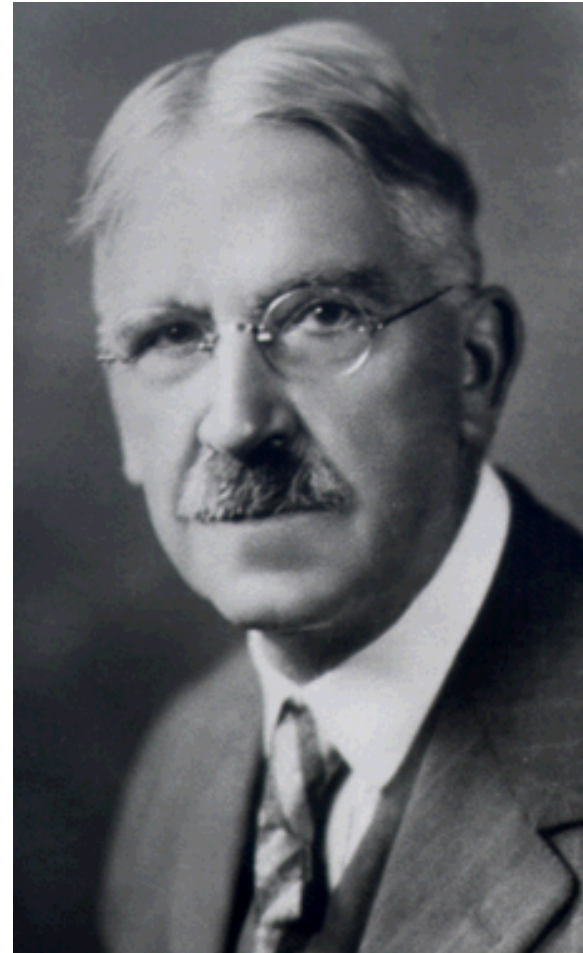
Input lists; app quizzes with questions/answers

Use iTunes to sync “study cards” to iPod or iPhone and study on the go



Active Learning: Not Exactly a New Theory

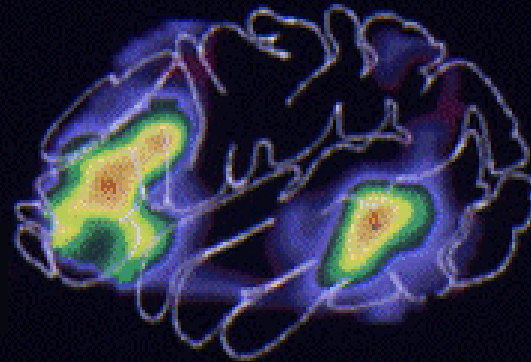
- Aristotle: “What we have to learn to do, we learn by *doing*.”
- University of Chicago’s John Dewey (1929):
“We learn by *doing* after we have reflected on what we have done”



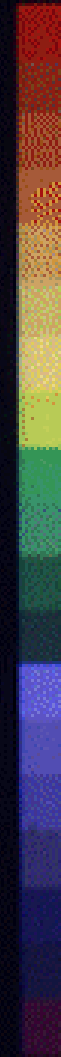
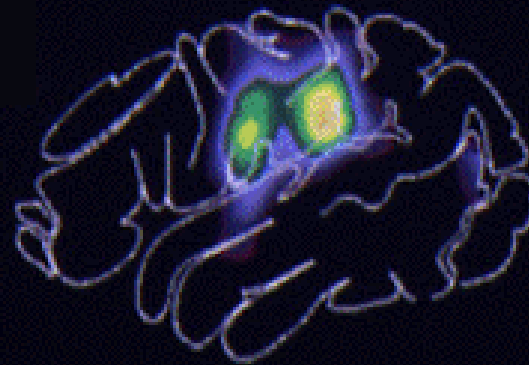
Unbeknownst to Dewey: Measurable Neurological Changes

- “Doing” involves more neural activity
- Creates more synaptic connections
 - Ideally, to previously learned information
- Connections to previously learned information help us remember new content longer
- Help us to generalize to new situations
- Allow brain to function more efficiently

UNPRACTICED



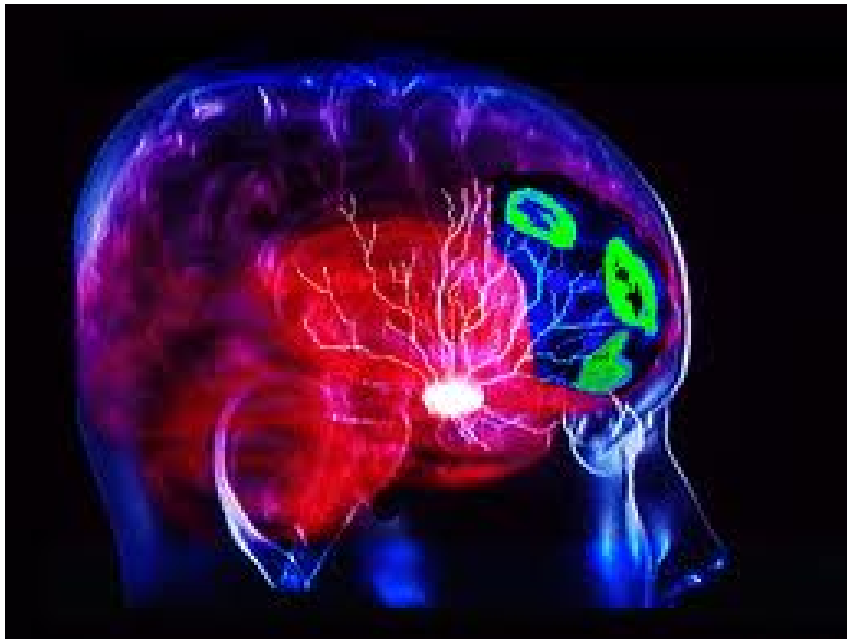
PRACTICED



Can Kids Learn When They are Upset?



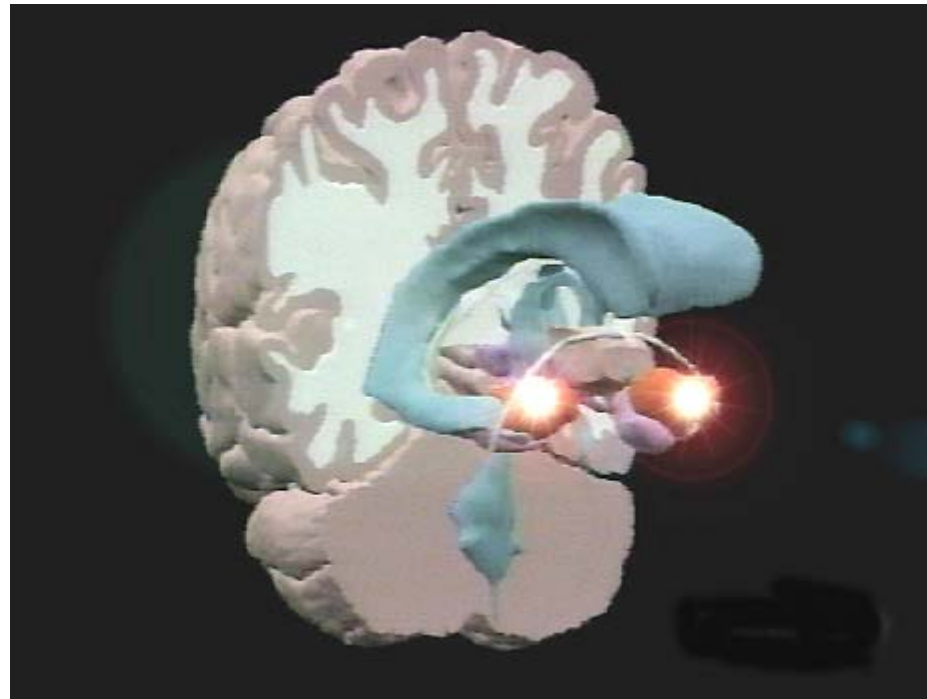
Back to the Brain:



- Long known: Reasoning, maintaining attention, problem-solving a function of frontal cortex
- When conveying new information, we activate frontal cortex

What About Emotional Reactions?

- From “Decade of the Brain:”
 - amygdala serves as gatekeeper to frontal cortex



<http://www.nlm.nih.gov/hmd/emotions/frontiers.html>

- In times of distress (fear, shock, anger, etc.), amygdala sends signal to adrenals
 - “Fight or flight” reactions via hormones in bloodstream
 - Heart, respiration rates increase
 - Blocks access to higher levels of processing!

Talking About Problems Reduces Stress, Clears Mind



Vaughn, S. (1997). *The Talking Cure: The Science Behind Psychotherapy*.

Explaining feelings, concerns
to attentive listeners
“produces long-lasting
changes in the neurons
that make up your mind”

Helping Pre-Teens Talk to Us

“Knowledge is Power”

2009, EAA (edaud.org)

- Anatomy, hearing loss, hearing aids
- Loss, grief, self-esteem, self-reliance, personal responsibility
- Coping, solution-focused conversation

Helping Teens Talk to Us

“Self-Assessment of Communication – Adolescent”

- Elkayam, J., & English, K. (2003)
- Wright, K., English, K., & Elkayam, J. (in press).

SAC-A: 12 Questions, 3 Domains

1. Hearing, Understanding at Different Times

Is it hard for you to hear or understand when talking with a group of people?

Is it hard for you to hear or understand movies, TV, the radio or CDs?

Is it hard for you to hear or understand in your classes?

SAC-A: 12 Questions, 3 Domains

2. Feelings About Communication

Do you feel left out of conversations because it's hard to hear?

Does anything about your hearing loss upset you?

Do you feel different from other kids when wearing hearing aids?

SAC-A: 12 Questions, 3 Domains

3. Other People

Do strangers, or people you don't know well notice that you have a hearing loss?

Do other people become frustrated when they talk to you because of the hearing loss?

Do people treat you differently when you wear hearing aids?

SAC-A available on GAP

“Guide to Access Planning”

- Phonak CD
- <http://www.phonak.com/us/b2b/en/pediatric/GAP.html>



PHONAK life is on contact For Professionals Press Careers About Phonak United States

Hearing and Hearing Loss Products and Solutions

You are in: Home > Usage and Support > Support > GAP Access Planning

Guide to Access Planning (GAP)



Introducing the New, Interactive Guide to Access Planning

Sponsored by Phonak, the interactive GAP Learning Guide was developed to help teens and young adults with hearing loss to better enable and empower themselves as they make significant life transitions. GAP is the first guide of its kind that is interactive and combines the wide spectrum of resource materials used to support self-advocacy for young people with hearing impairment.

Safer in Group?



Conclusions

- When we plan to teach, we often ask ourselves, “What am *I* going to talk about?”
- Instead, ask “What is *child* going to do?”
 - If answer is “listen,” instruction needs to be redesigned!

Active-Learning Approach

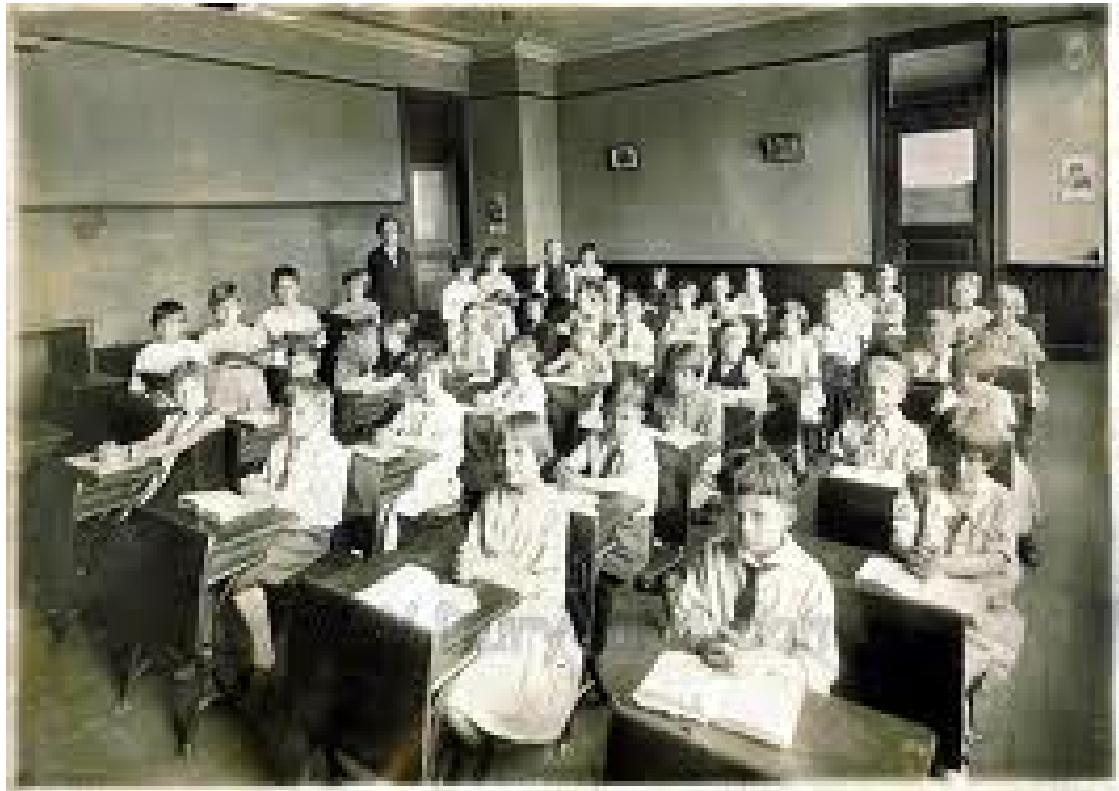
- Child will –
 - Write a story
 - Describe anatomy to a parent
 - Find info on new tech. and share with friends
 - Conduct a survey or experiment, collect data
 - Interview peers about friendship challenges
 - Create a PSA video or radio spot

Ready to Learn? Ready to Change?

- More likely with:
 - Carefully designed instruction
 - A track record of small wins
 - A peaceful spirit (not upset)
 - Social support
 - Someone to talk to

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This time tomorrow:

