

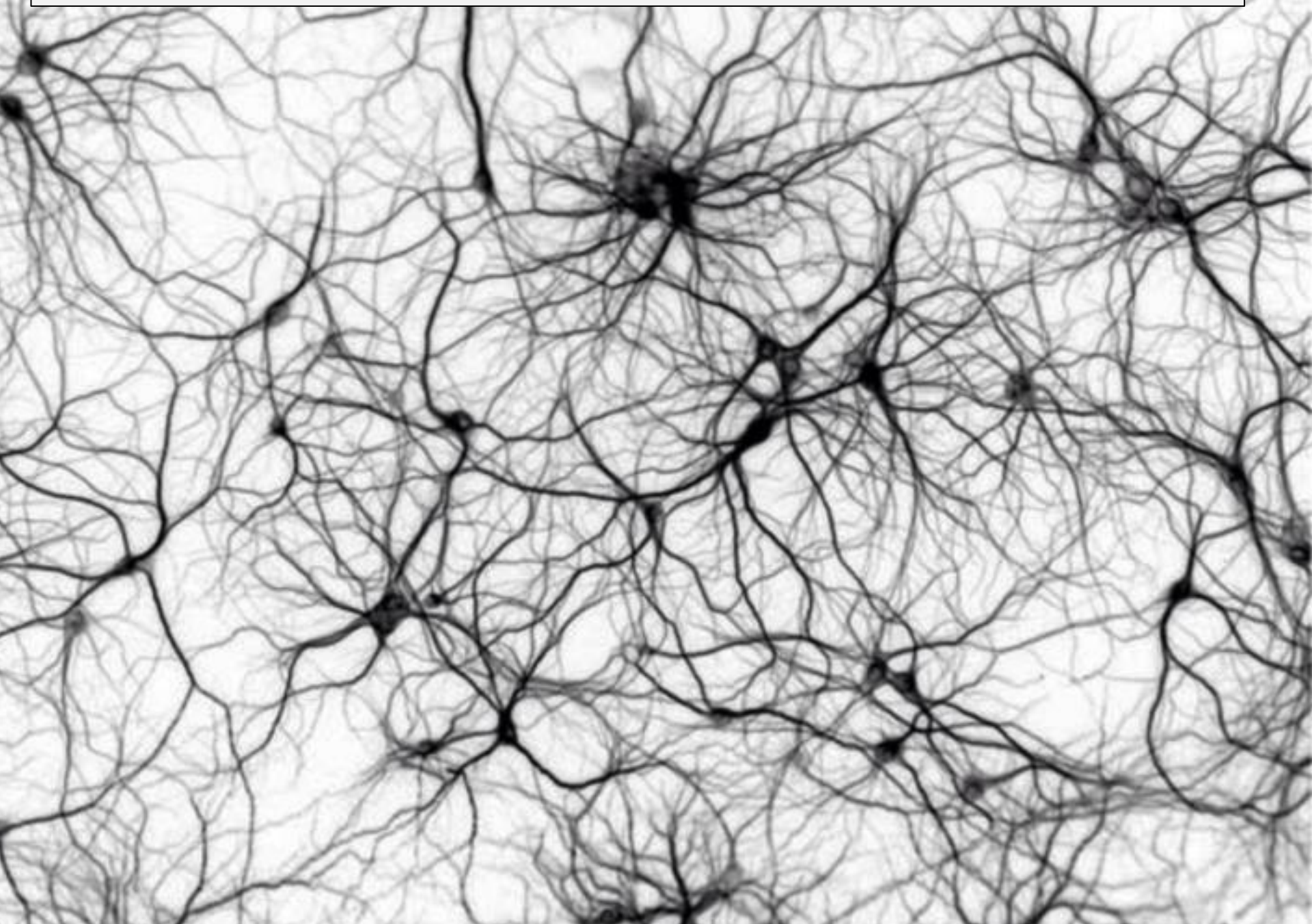
MULTIMODAL LEARNING: ENGAGING THE WHOLE BRAIN IN THE CLASSROOM

SESSION 4
FIRST LITERACY
APRIL 5, 2019

AGENDA

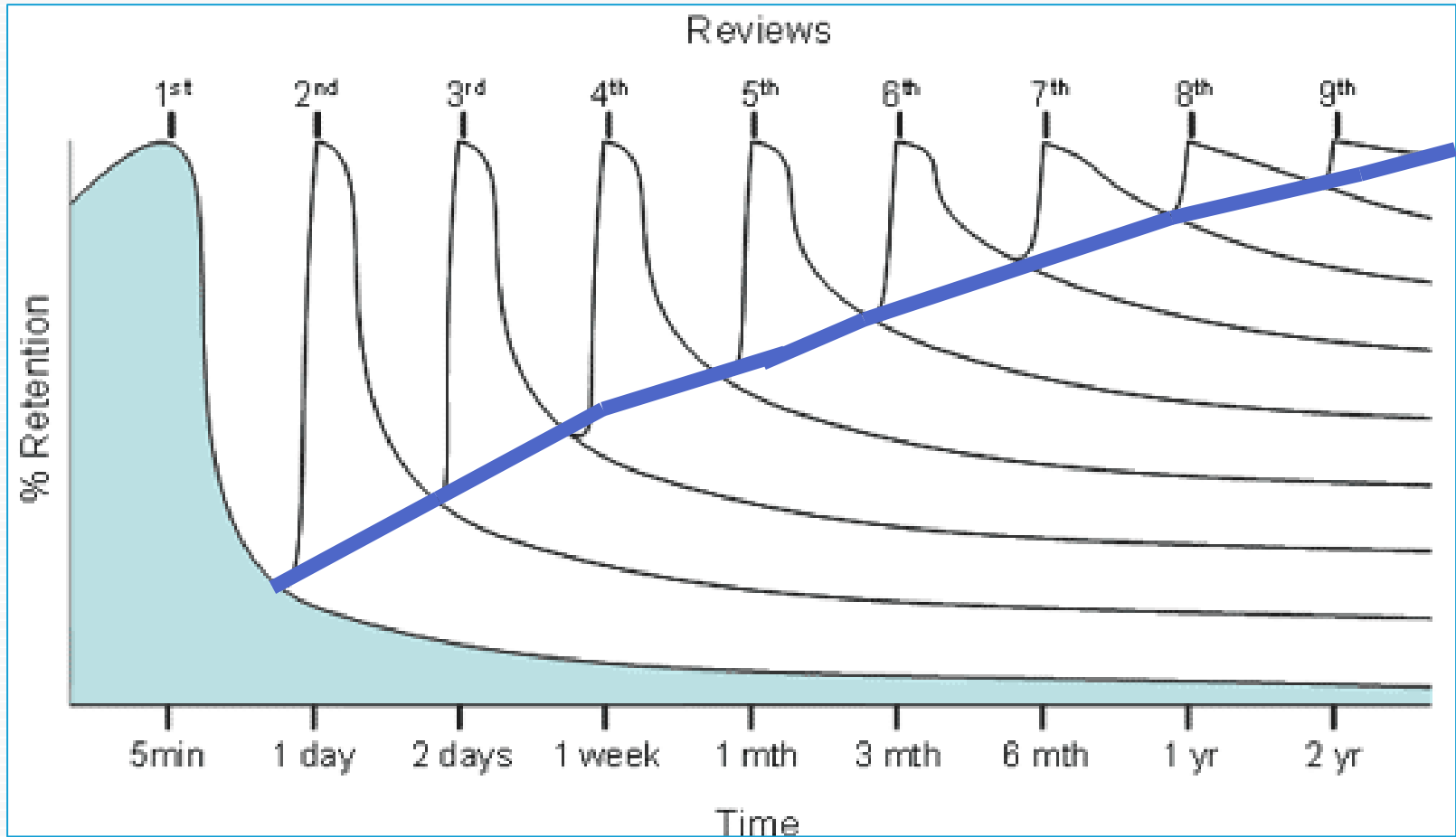
- 1. Review of Principles of Memory & Learning**
- 2. Teacher share**
- 3. Multimodal Learning**
 - a. Combine Modalities
 - b. Varied Repetition

What do you see? What does it have to do with learning?



What Do You See?

Where Is the Learning Curve?



CAN YOU EXPLAIN WHY?



“If you read a piece of text through twenty times, you will not learn it by heart so easily as if you read it ten times while attempting to recite it from time to time and consulting the text when your memory fails.”

~ Francis Bacon, 1620

QUIZ & TRADE

1. Ask and answer your questions.
2. Trade questions.
3. Find a new partner.

Is there something you tried in your classroom that you would like to share with the group?

- 1. What did you do?**
- 2. How did it go?**
- 3. How will you tweak it next time?**

**SHARING OUR
PRACTICE**

BEFORE WE START . . .

Write down three learning points you have taught recently:

- For example:
 - paragraph writing
 - past tense verbs
 - interview skills

Multiple Modalities



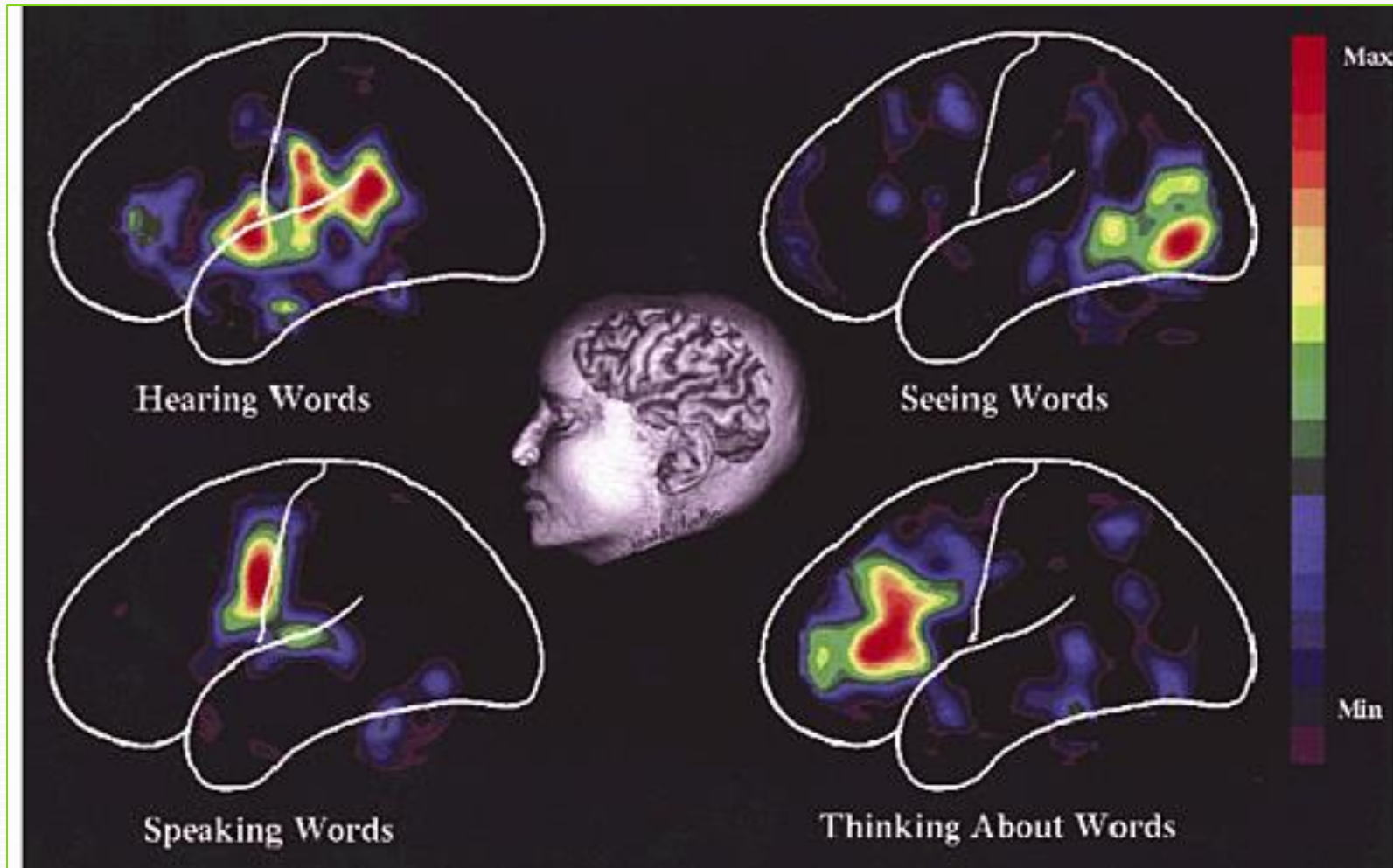
Tommy Watson

MULTIMODAL LEARNING & MEMORY

- 1) Retrieval strength**
- 2) Storage strength**

**Language learning
is a whole brain
experience.**

LANGUAGE & THE BRAIN



Combine Modalities

“Our senses are designed to work together, so when they are combined . . . the brain pays more attention and encodes the memory more robustly.”

Medina, *Brain Rules*, 2014

What are “the modalities”?

TEXT + VOICE

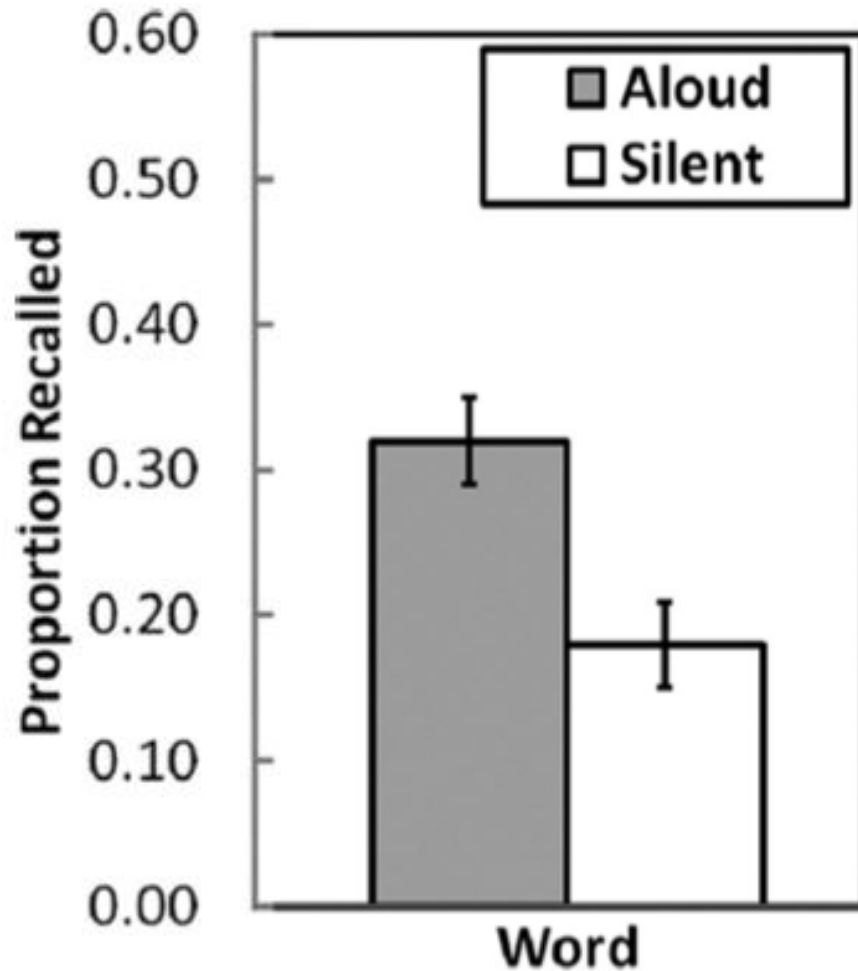
READ ALOUD

Colin Macleod tested recognition of words.

Group A: Read a word and say it aloud.

Group B: Read a word silently.

TEXT + VOICE



MacLeod (2012)

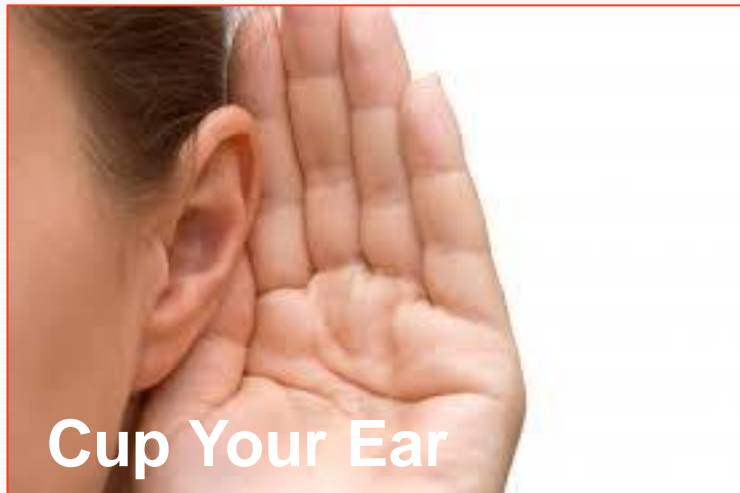
THE PRODUCTION EFFECT

“Saying a word aloud leads to better memory than does reading a word silently.”

~Colin MacLeod (2013)

READING + VOICE

Choral Reading



Cup Your Ear

Whisper Phones

CLASSROOM PRACTICE: CUP YOUR EARS

“The human brain is a wonderful organ. It starts to work as soon as you are born and doesn't stop until you get up to deliver a speech.”

~ George Jessel

CLASSROOM PRACTICE: SILENT READ AND REPEAT

- 1. Teacher reads a line.**
- 2. Students read a line mouthing the words but not voicing the words.**
- 3. Then students read the line aloud.**

It's not that I'm so smart, it's just that I stay with problems longer.

~ Albert Einstein

TEXT + VISUALS

*“Hear a piece of information, and
3 days later we will remember 10% of it.
Add a picture, and we will remember 65%.”*

~ John Medina, Brain Rules, 2014

HUMANS ARE VISUAL LEARNERS.



<http://imgpics.gq/study-tips-for-the-visual-learner>

**More than half the human brain is
involved with processing
visual information.**



What do you see going on in the picture?
What makes you say that?
What else do you see?

USE VISUALS

- a. What visuals do you use in class?
- b. How do you use visuals in the classroom?

BRAINSTORM

TRUE OR FALSE?

- 1. There is one area of the brain that controls our language functions.**
- 2. Speaking the words we read reduces our memory of what we read.**
- 3. Our dominant sense is visual.**

**Learning requires
varied practice.**

A CASE IN POINT

What is more effective for learning?

- a. Study in the same space every time.**
- b. Study in a many different environments.**

“Forcing the brain to make multiple associations with the same material may, in effect, give that information more neural scaffolding.”

~Carey, NYT, 2010

VARY WITH EACH REPETITION

How?

With modalities!

THREE

EXAMPLES

EXAMPLE ONE: MULTIMODAL SPELLING

- Meaning
- Sound
- Print
- Movement
- Visualization
- Handwriting
- Review



synesthesia

EXAMPLE TWO: MULTIMODAL FEEDBACK

Pronunciation



VISUAL FEEDBACK ON CONSONANTS

Phone Mirrors: th(unvoiced),m,p,b,v,f

- The tongue with the unvoiced th.

thanks

- The lips meet with m, p, and b.

time pat ball

- The teeth on the lower lip with v and f.

bet vet five life

VISUAL FEEDBACK ON VOWELS

Open- Closed
Front – Back

PHYSICAL FEEDBACK ON CONSONANTS

**z, th, v, b ,g, and
d (voiced sounds)**

With their hands on
throats, or ears
plugged, students
practice :

thank – **th**ere

fan – **v**an

tock - **d**ock

bus – **bu**zz

back – **ba**g

lap - **la**b

PHYSICAL FEEDBACK ON CONSONANTS

Paper Strips: p, ch, and initial t's

- Students hold up thin strips of paper in front of their mouth as they practice the sounds.
- The paper should bend with the burst of air.

chop / shop

tin / thin

pin / bin

EXAMPLE THREE:

COLORS

- 1. Name colors in a book.**
- 2. Name colors in the classroom.**
- 3. Name colors in a painting.**
- 4. Take a photo and name colors in the photo.**



Louise's Field by Jessica Miller

Use a checklist to remind you of possibilities.

Read through the checklist:

- 1. What have you done recently in class?**
- 2. What do you want to try out soon?**

A CHECKLIST

- 1. Identify one learning point.**
- 2. Think of three different ways to practice the learning point.**
- 3. Use different modalities with each practice activity.**

AGENDA

- 1. Review of Principles of Memory & Learning**
- 2. Teacher share**
- 3. Multimodal Learning**
 - a. Combine Modalities
 - b. Vary the modalities

- a. What did you learn in this session?**
- b. What practice or idea do you want to take away?**

WRITTEN REFLECTION

KEEP IN TOUCH.

THANK

YOU!