SCHOLARSHIP FOR EXCELLENCE IN TEACHING

2025 SET Cohort participant, Professor Holly Solano

AI-generated avatar* for Professor Holly Solano (30-word text description)

Students I am currently trusted to guide:

- English 101
- English 102
- IERW 990 (tutor)
- PHED156 (Women's Self-defense and Sexual Assault Prevention)
- Tennis Club

*students all voted this avatar was too creepy.

ASSIGNMENT
“READ CHAPTER 1”…

Students see this?

How to improve student skills?

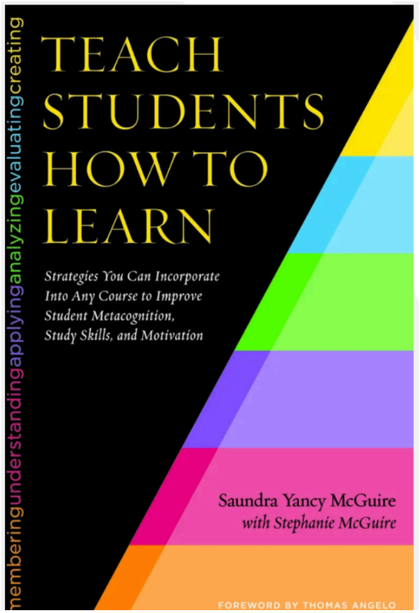
reading comprehension
critical assessment
verbal discussion
Recall

Teaching for Metacognitive Equity

"Metacognitive equity describes our need to close the gap between students who have acquired effective thinking and learning strategies and those who have not. Often, whether or not a student possesses those strategies—rather than any lack of innate ability or talent—makes the difference between academic success and discouraging failure."

– Saundra McGuire

THE RESOURCES APPLIED



Teach Students How to Learn
by Saundra Yancy McGuire with Stephanie McGuire

Bloom's Taxonomy in action

Scaffolding instructional design principles

- **Metacognition & Mindset:** Encourages "think about their thinking" and adopt a growth mindset: believe learning capabilities can improve.
- **Active Learning** techniques; emphasizing active retrieval and self-explanation over passive reading and re-reading.
- **Study Techniques:** "Study Smarter, Not Harder" approach
- **Faculty Tools**
- **Evidence-based (not anecdotal)**

THE INSTRUCTIONAL BUILD:

a 20-minute mini-workshop hands-on experience in the metacognitive skills of intention, scanning, and reflection, focused on low stakes confidence-building, and personal growth self-measured, quantified, and affirmed by each student.

TAKE A FEW MOMENTS AND BE A FIRST-YEAR COLLEGE STUDENT AGAIN. . .

WHAT ARE YOUR BIG BRAIN META-POWERS?

METACOGNITION

How many tigers do you see?

YOUR METACOGNITIVE POWERS

- Intention
- Scanning
- Interview the assignment
- Report back (paraphrase, outlines, maps)
- Move through the textbook
- Take notes with your magic hands
- Do homework before looking at answers
- Use homework as power quizzes
- Teach an audience
- Partner up
- Be a detective: assemble mock exams
- Reflect

EXERCISE:

Count the vowels

Dollar bill
Shoes in a pair
Wheels on a tricycle
Four-leaf clover
Fingers on a hand
Six-pack
Days in a week
Octopus arms

Cat lives
pennies in a dime
Football, cricket, or soccer team
Dozen eggs
Unlucky Friday
Valentine's Day
Quarter hour

(modified from McGuire & McGuire, p.46-47)

EXERCISE:

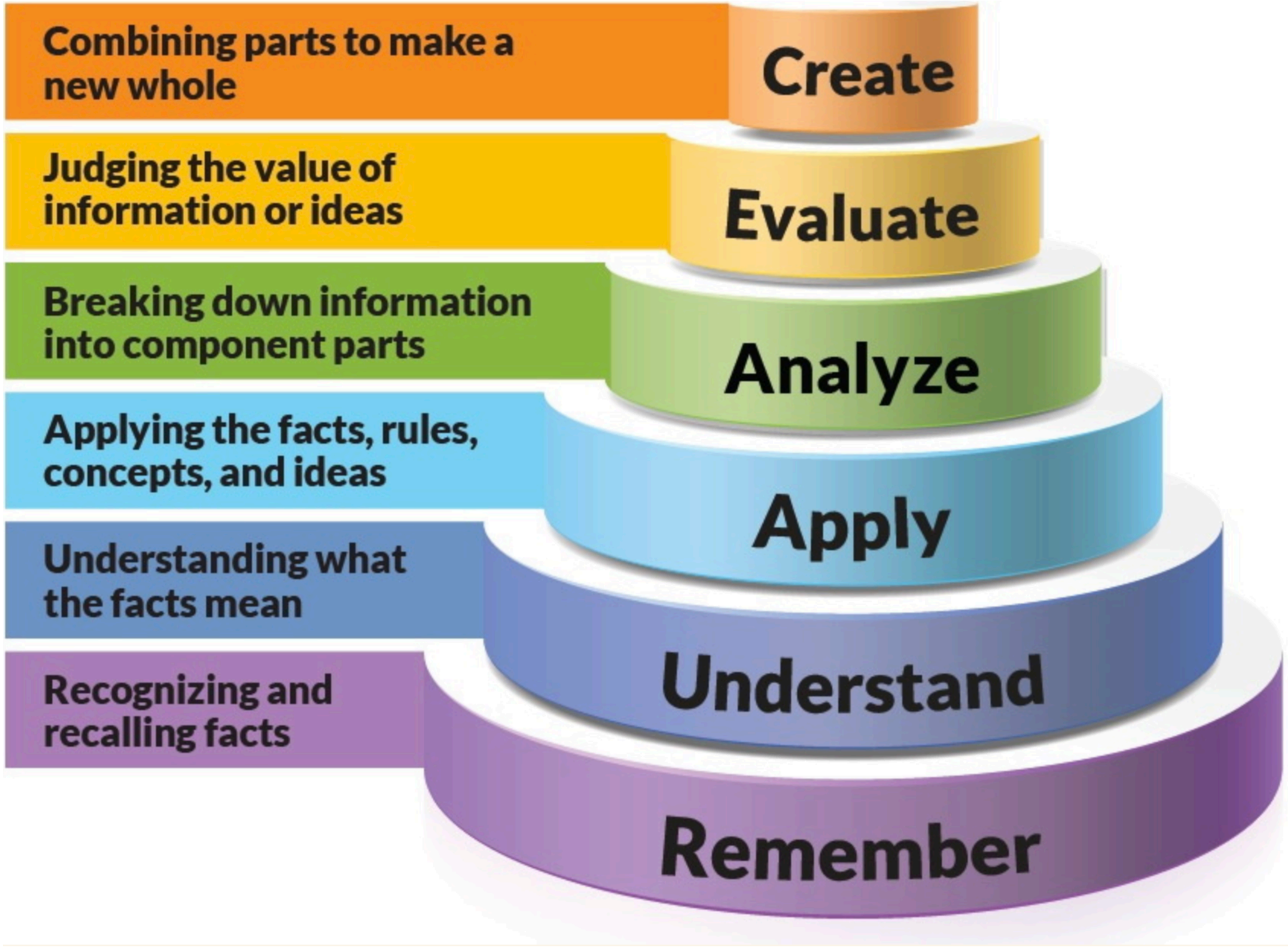
Count the vowels

WHAT WAS YOUR “GRADE”?

THEN SWITCH ON…INTENTION

NOW WHAT IS YOUR “GRADE”?

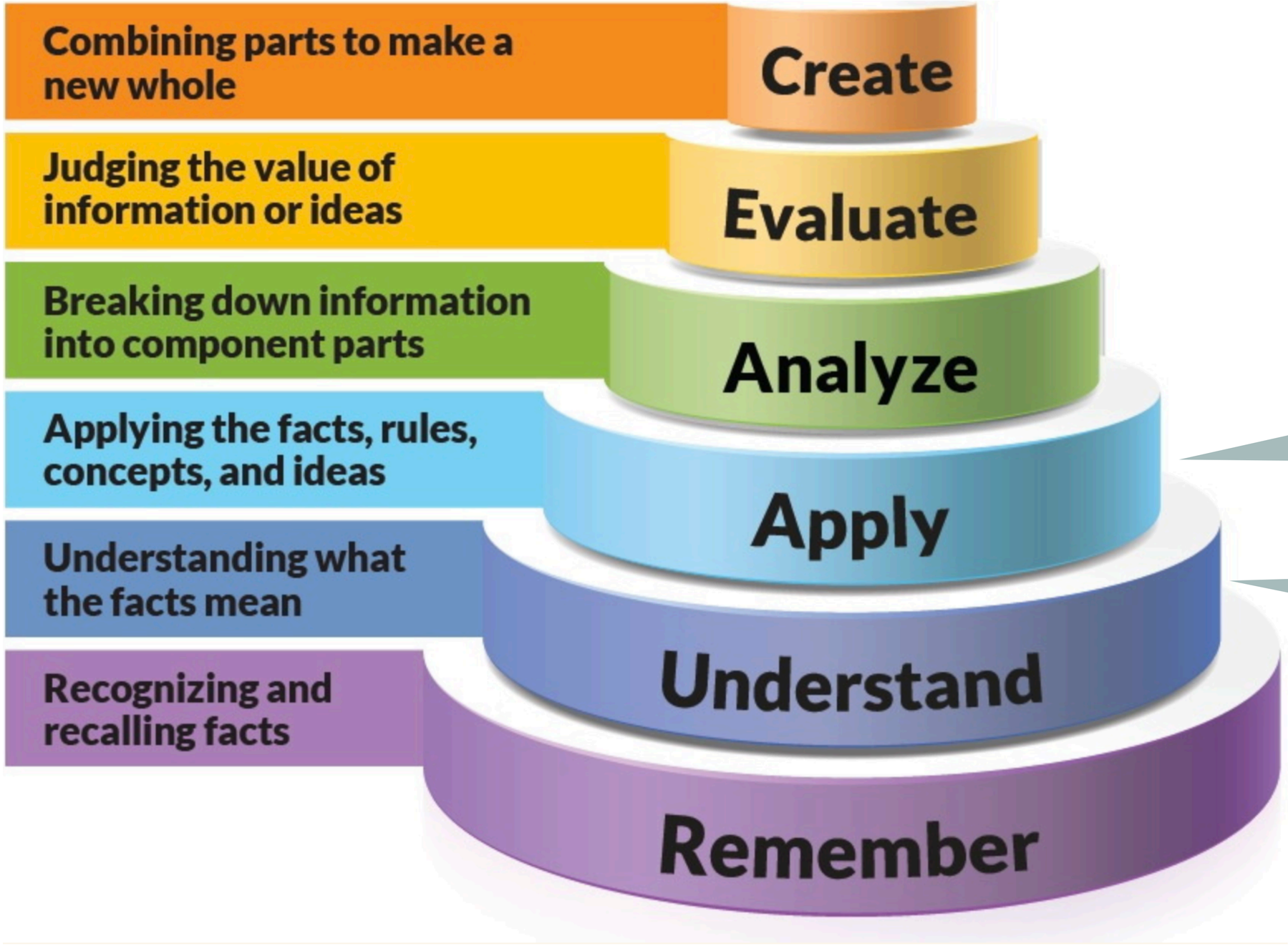
Bloom's Taxonomy



your Metacognition switch:

notice different kinds of learning

Bloom's Taxonomy



your Metacognition switch:

Notice different kinds of learning

Three ways to solve a math problem…

Use a word in a sentence…

Spelling words…

SCANNING

"The procedure is simple. First you arrange items into different groups. Of course, one pile may be enough depending on how much there is to do. If you have to travel somewhere to find facilities, that is the next step. It is better to do too few things at once than too many. This may not seem important, but complications can be expensive.

After the procedure is complete, you arrange the materials into different groups again. Then they can be put in their places. Eventually they will be used again, and the whole cycle will need to be repeated. This is part of life. It is difficult to predict an end to this task in the immediate future; but, maybe future inventions will change that."

(Paraphrased from McGuire & McGuire 46-47)

LAUNDRY

"The procedure is simple. First you arrange items into different groups. Of course, one pile may be enough depending on how much there is to do. If you have to travel somewhere to find facilities, that is the next step. It is better to do too few things at once than too many. This may not seem important, but complications can be expensive.

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SCANNING + INTENTION

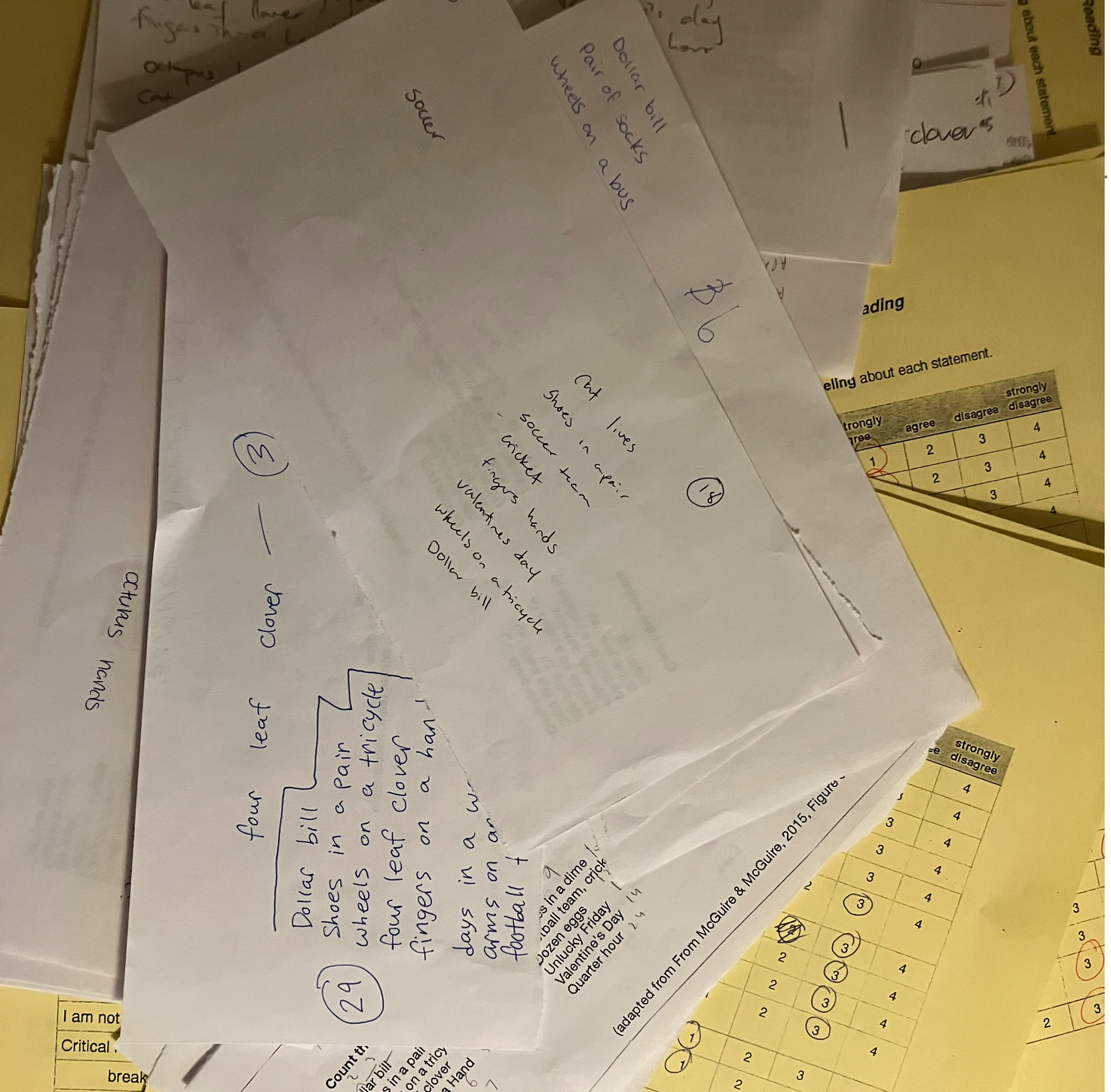
No-risk practice
Scaffolded group support
Low stakes verbal engagement
affirmations

Martin Luther King, Jr's essay:
Ways of Meeting Oppression

Martin Luther King, Jr. by Jack Lewis Hiller | 1960 | Gelatin silver print | National Portrait Gallery, Smithsonian Institution; gift of Jack Lewis Hiller,© 1960 Jack L. Hiller

Metacognition skill: reflection

WHAT DID YOU LEARN?



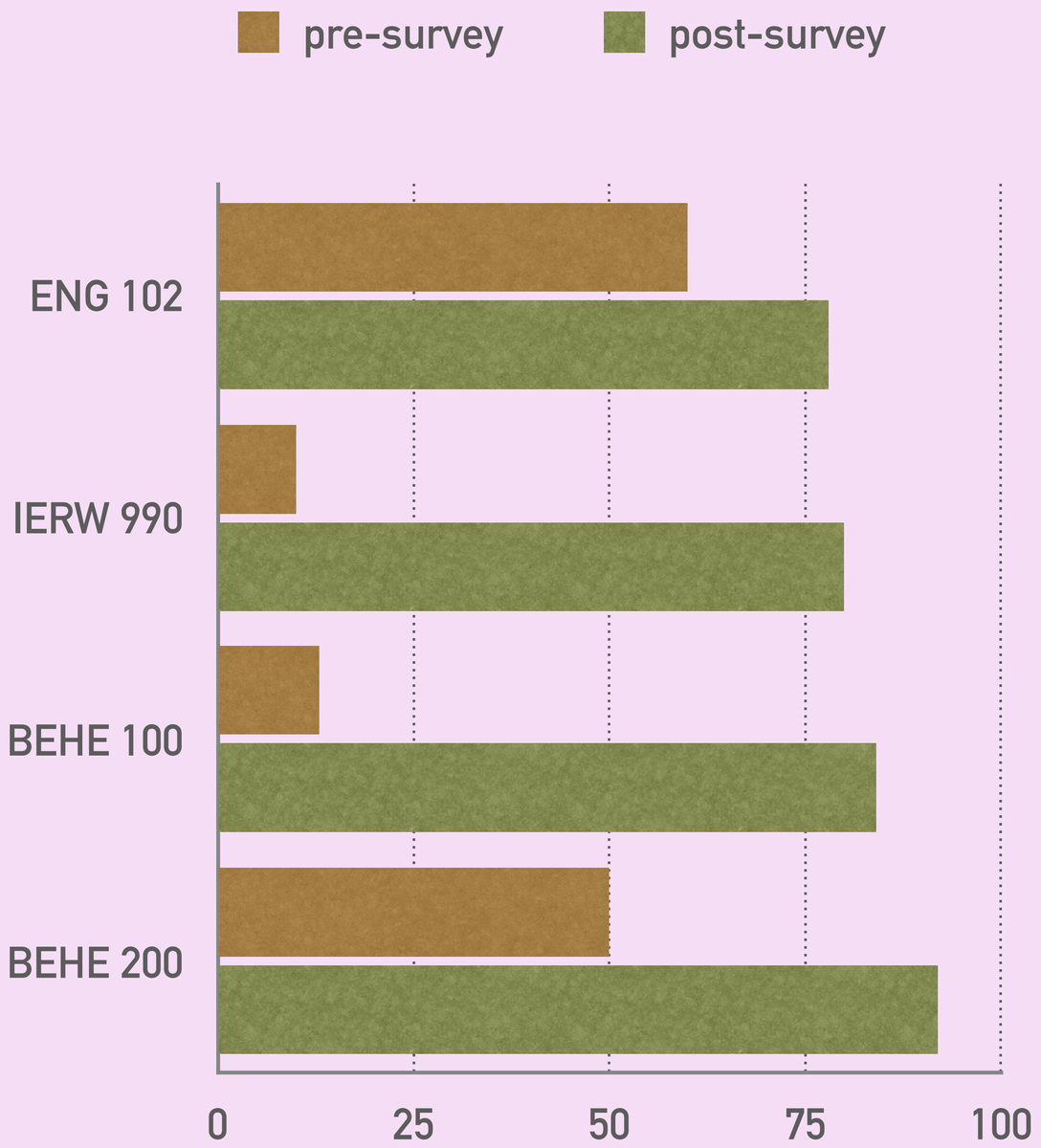
ENCOURAGING RESULTS

- Pre- and post- perception surveys

  Kirkpatrick Level 2 evaluation

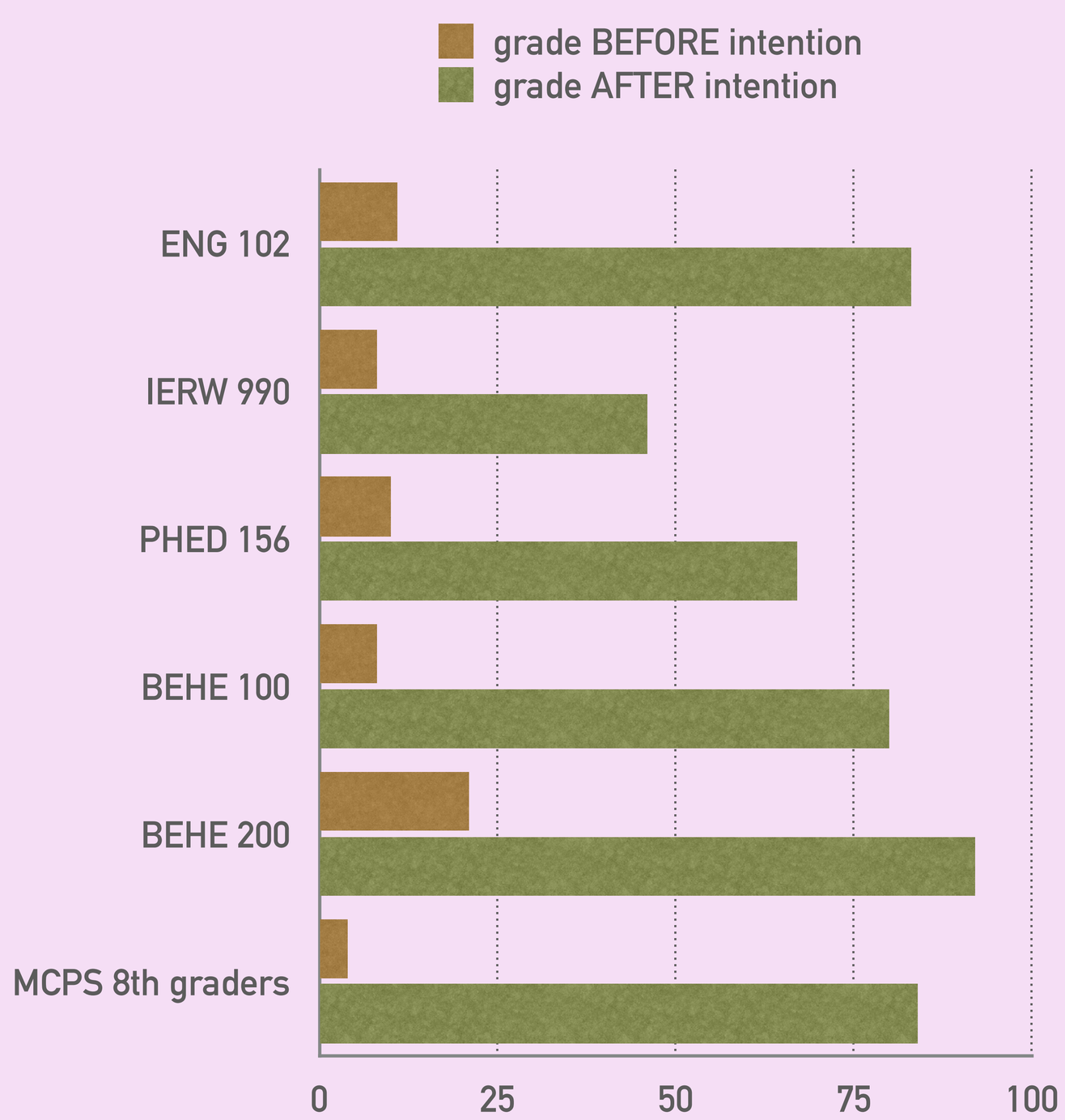
- Recording of low stakes exercise scores before and after intention discussion

  Kirkpatrick Level 3 evaluation - measurable behavior



PRE- AND POST- PERCEPTION SURVEYS

- Average of 15% of participants expressed confidence in their critical reading ability before the exercise
- Average of 75% of participants rated their confidence after exercise as 1 or 2 (“Strongly agree” or “agree”)



ENCOURAGING RESULTS

- Average grades before intention: 8% - 21%
- Average grades after intention switched “on”: 46% - 100%

100% of participants

improved their low stakes exercise grade

by at LEAST 400%

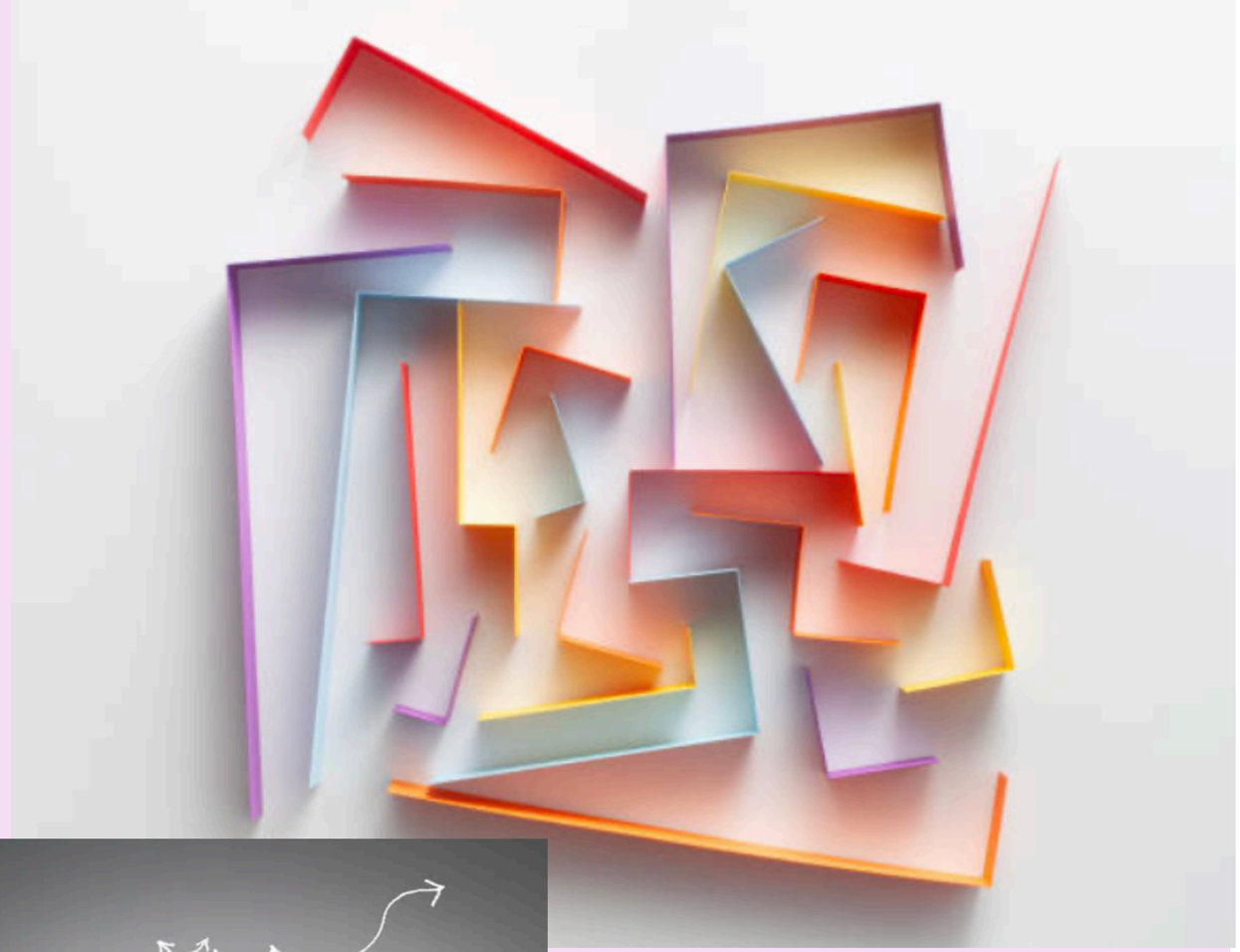
(Thank you Dr. McGuire!)

ENCOURAGING RESULTS

- Verbal participation increased 400+%
- Verbal risk-taking increased 300+%
- Willingness to take risks increased 200%

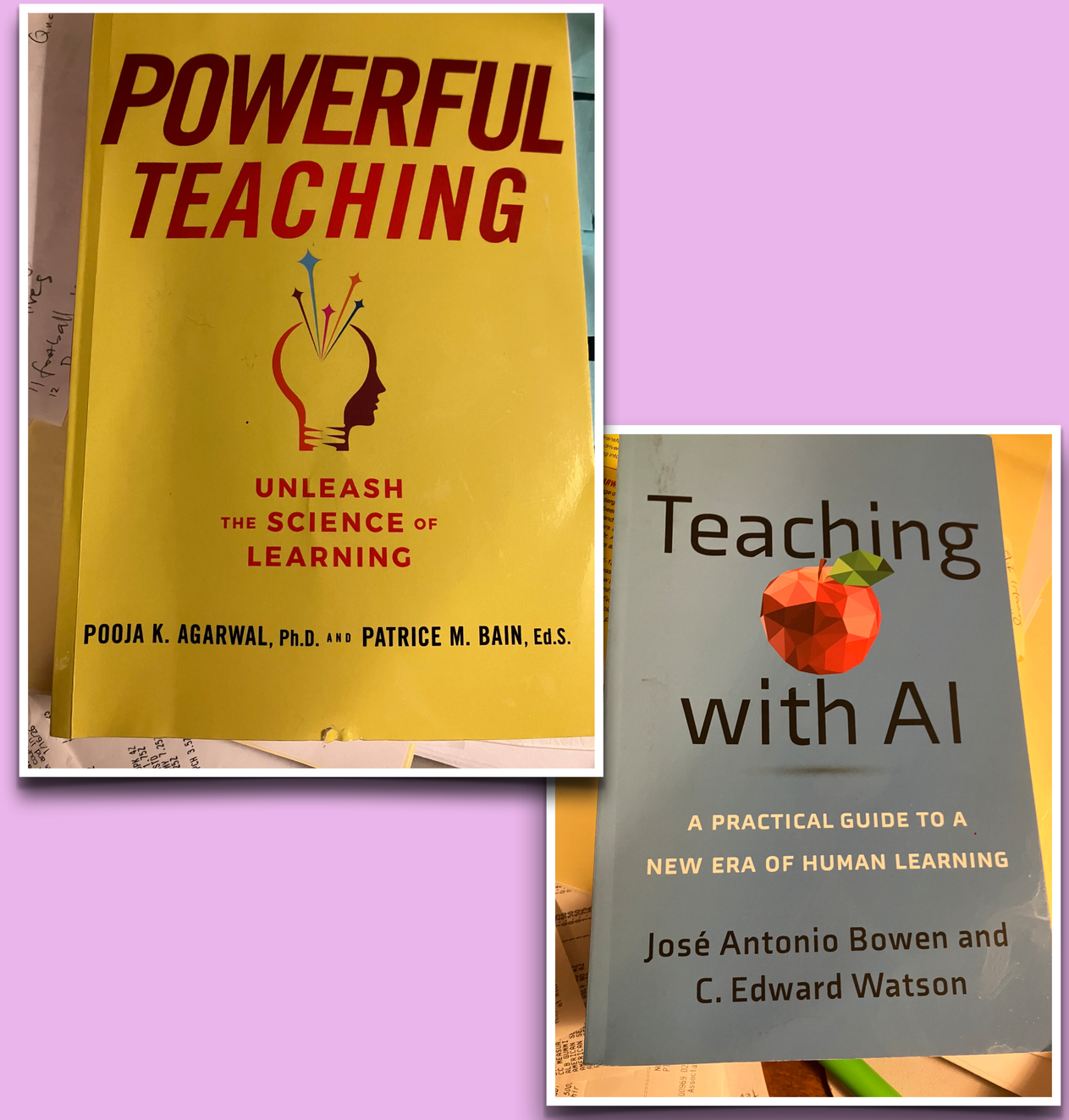
retrieval and scaffolding works

As measured by frequency counts of in-class participation from other activity periods throughout the semester in ENG101 and 102



POSSIBLE CONFOUNDING VARIABLES

- Participants may not have clearly understood the survey questions
- Presumed reading comprehension baseline may be flawed assumption
- Illusions of fluency (optimism bias)
- Pre-existing fluency
- Small n values
- Limited scope causality analysis: reported perception vs. measured skills (pre- and post- intervention measures) plus no regression model applied



NEXT STEPS IN SCAFFOLDING:

- Retrieval
- Spacing
- Interleaving
- Apply skills to higher stake contexts, such as screening sources for implicit bias or assessing AI-generated prose they prompt

SCANNING

LAUNDRY

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