Memory Strategy Instruction: Goal-Setting and Positive Feedback May Foster Task Commitment

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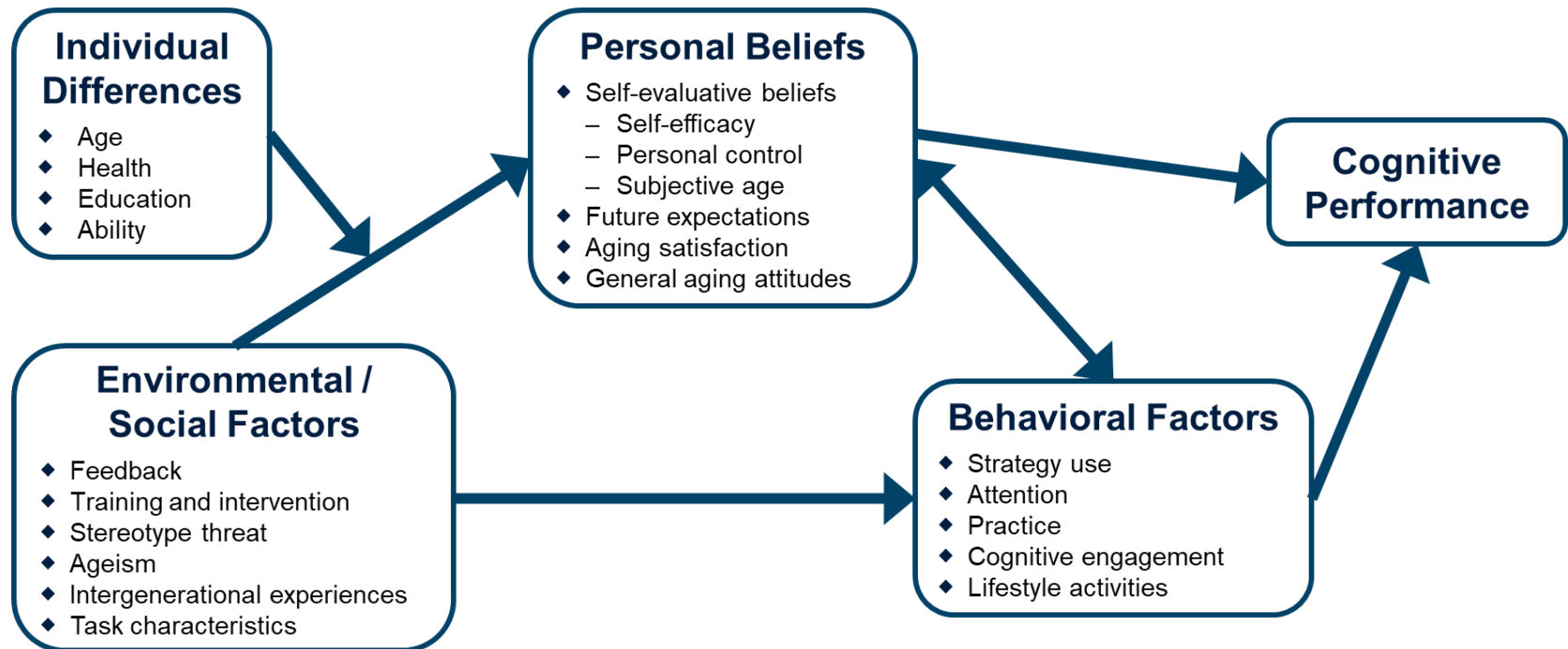Psychology Department
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Self-regulatory memory

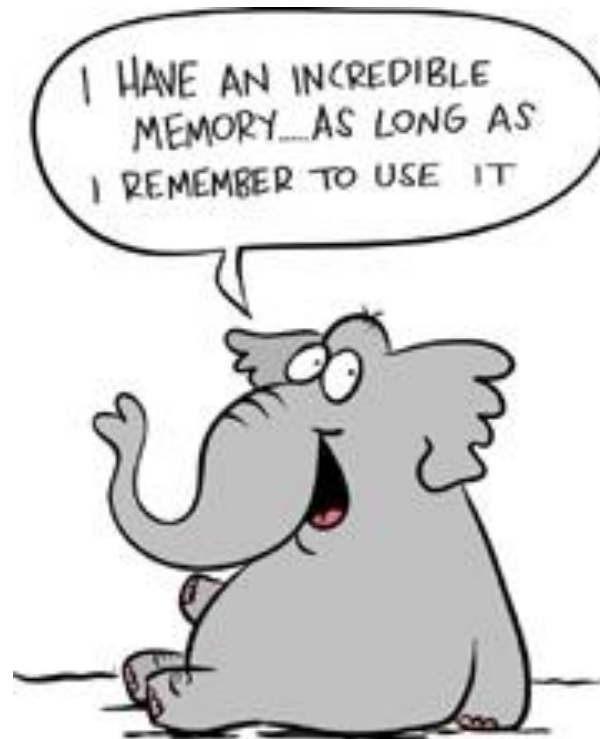*Strickland-Hughes et al. 2016; Strickland-Hughes & West, 2021; 2022; West, Strickland-Hughes & Smith, 2018*

Goal-setting → better memory performance across adulthood

★ Challenging but realistic goals

★ Especially with positive feedback

★ For self-set and experimenter-assigned goals

★ Might enhance motivation or commitment

Locke & Latham, 2014; West, Bagwell, & Dark-Freudeman, 2005; West, Dark-Freudeman, & Bagwell, 2009; West, Strickland-Hughes, & Smith, 2018; West, Welch, & Thorn, 2001

Strategy use →
better memory performance

Bailey, Dunlosky, & Hertzog, 2014; Gross & Rebok, 2011; Hinault, Lemaire, & Touron, 2017; Jordano & Touron, 2018

Strategy training → better strategy use
(we assume)
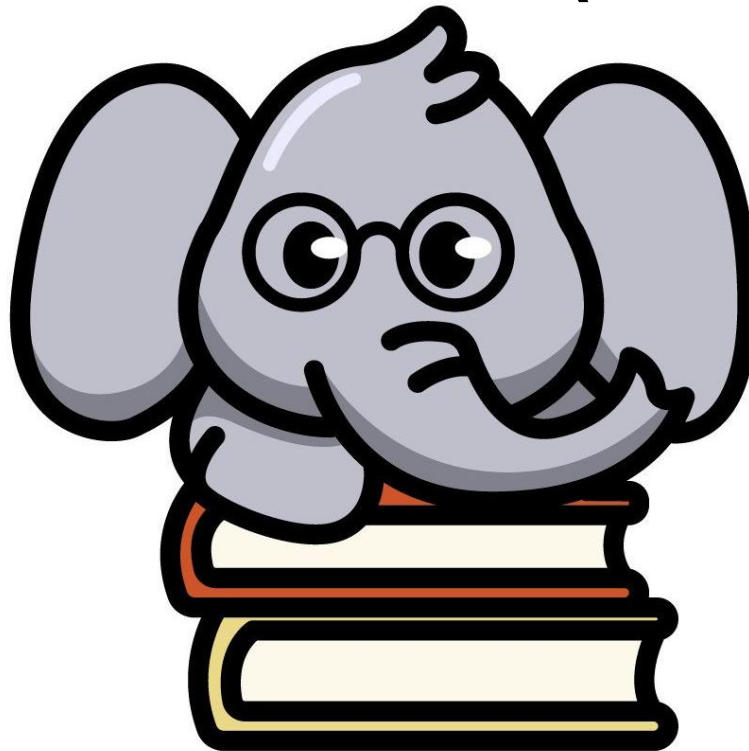
Cavallini et al., 2019; Gross et al., 2012; Strickland-Hughes & West, 2022; West & Strickland-Hughes, 2015

Some training programs are more effective than others.

Self-regulatory training?

Training with goal-setting & feedback?

Payne et al., 2012;
Strickland-Hughes & West, 2015;
*West & Strickland-Hughes, 2017;*
West et al., 2009

Purpose of the present study

★ Does **brief** strategy instruction *with* participant **goal-setting** and positively-framed objective **feedback** lead to:

  ◆ Better **memory performance**?

  ◆ More effective **strategy use**?

  ◆ Greater **task commitment**?

★ Compared to brief strategy instruction *without* goals and feedback

★ Compared to **no** strategy instruction

Methods

★ **Participants:** $N = 97$ students over 18 yo.

★ **Design:** 3 Condition (between) ✕ 3 Time (within) mixed-model

★ **Procedure:** 1-hr individual Zoom call, surveys and memory tests

★ **Random assignment:**
   ◆ $n = 34$ **Training + Goals & Feedback (FB)**
   ◆ $n = 31$ **Training Only**
   ◆ $n = 32$ **No Training Control**

Procedure
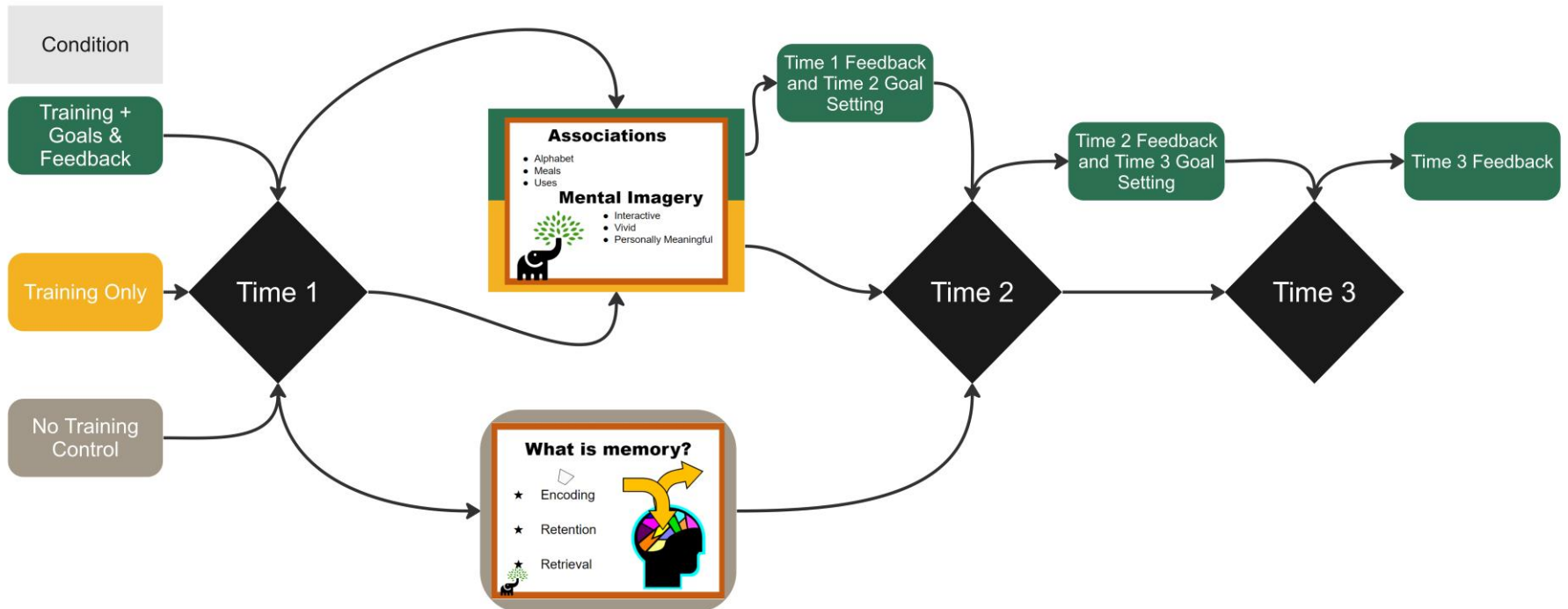
Measures

Task Commitment (4 items)

How committed are you to this task?

not at all ○ ○ ○ ○ ○ ○ ○ completely

To what extent do you care about this task?

not at all ○ ○ ○ ○ ○ ○ ○ completely

α_1=.93; α_2=.96; α_3=.96

Klein et al. 2014; Unidimensional Target Neutral Commitment Measure (KUT)

Measures

Expanding List Paradigm (15, 30, 45 items)

SLICED HAM	APPLES	BANANAS
WAFFLES	TURKEY	HONEY HAM
ROAST BEEF	BOLOGNA	PANCAKES
PEACHES	BISCUIT	GRAPES
OATMEAL	WATERMELON	MUFFIN

West et al., 2008

Measures

Expanding List Paradigm (15, 30, 45 items)

Say all the words you can remember in any order.

West et al., 2008

Measures

Expanding List Paradigm (15, 30, 45 items)

MUFFIN	CASHEWS	SALTED PEANUTS
WALNUT	WAFFLES	ROAST BEEF
BOLOGNA	OATMEAL	DEODORANT
ALMONDS	LIP BALM	WATERMELON
TURKEY	PEACHES	GRAPES
AFTERSHAVE	STAPLER	SLICED HAM
PECANS	PANCAKES	PAPER CLIPS
APPLES	BANANAS	PENCILS
BISCUIT	FOLDER	HONEY HAM
HAND LOTION	SHAVING CREAM	MARKER

West et al., 2008

Measures

Expanding List Paradigm (15, 30, 45 items)

|		
SHAVING CREAM	HONEYHAM	PRETZELS
BANANAS	ROAST BEEF	CAULIFLOWER
DEODORANT	TOMATOES	SALTED PEANUTS
BISCUIT	WATERMELON	MARKER
WHIPPED CREAM	CUCUMBERS	TURKEY
WAFFLES	CASHEWS	YOGURT
HAND LOTION	MUFFIN	BROCCOLI
CHEESE CURLS	CORN CHIPS	LIP BALM
WALNUTS	SOUR CREAM	PECANS
PENCILS	ALMONDS	PANCAKES
SLICED HAM	STAPLER	PAPER CLIPS
POPCORN	POTATO CHIPS	FOLDER
PEACHES	BUTTER	GRAPES
MARGARINE	APPLES	CARROTS
BOLOGNA	OATMEAL	AFTERSHAVE

West et al., 2008

Measures

Strategy Checklist (14 strategies + other)

**Please indicate all of the methods that you used while you were studying the shopping lists.**

☐ **1.** I concentrated and paid attention to each word.

☐ **2.** I thought about how I might make a meal out of some items (e.g., "eggs, cereal, orange juice are my breakfast").

☐ **3.** I repeated single words over and over to myself (e.g., "peas," "peas," "peas," "peas").

☐ **4**. I repeated groups or sets of words over and

☐ **9.** In my mind, I pictured each individual item.

☐ **10.** In my mind, I pictured sets of items together (e.g., sugar in a bowl with a spoon).

☐ **11.** In my mind, I pictured items interacting in an active video (e.g., the coffee is being poured into a mug, with milk, and a chocolate drop).

☐ **12.** I connected the first letters of the items

West et al., 2009
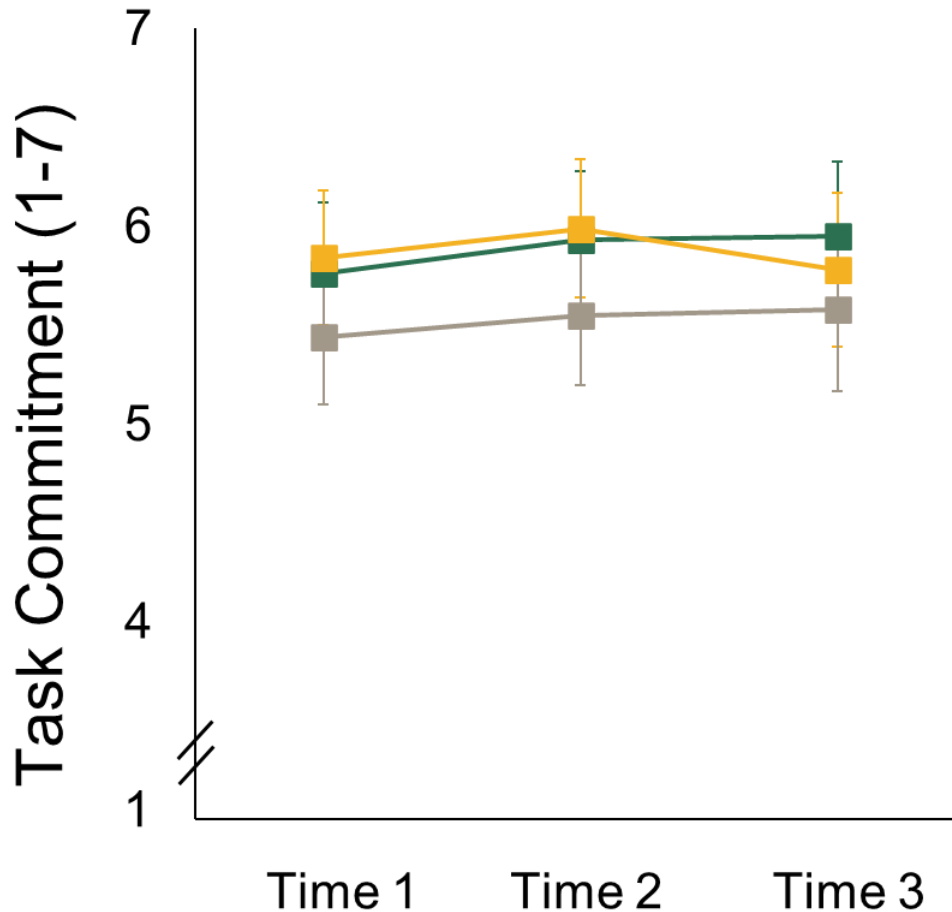
List Recall by Condition & Time
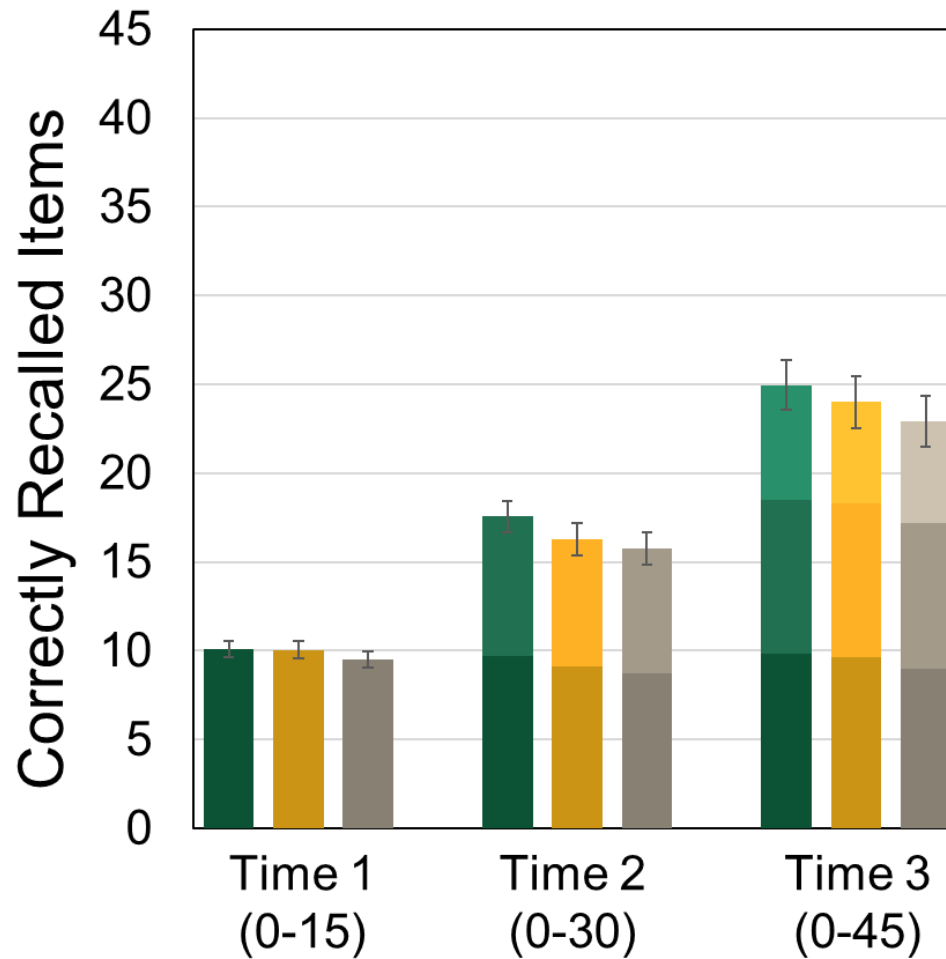
Main effect of time, $F(2,184) = 355.31$, $p < .001$, $\eta^2 = .791$

Strategy Use by Condition & Time
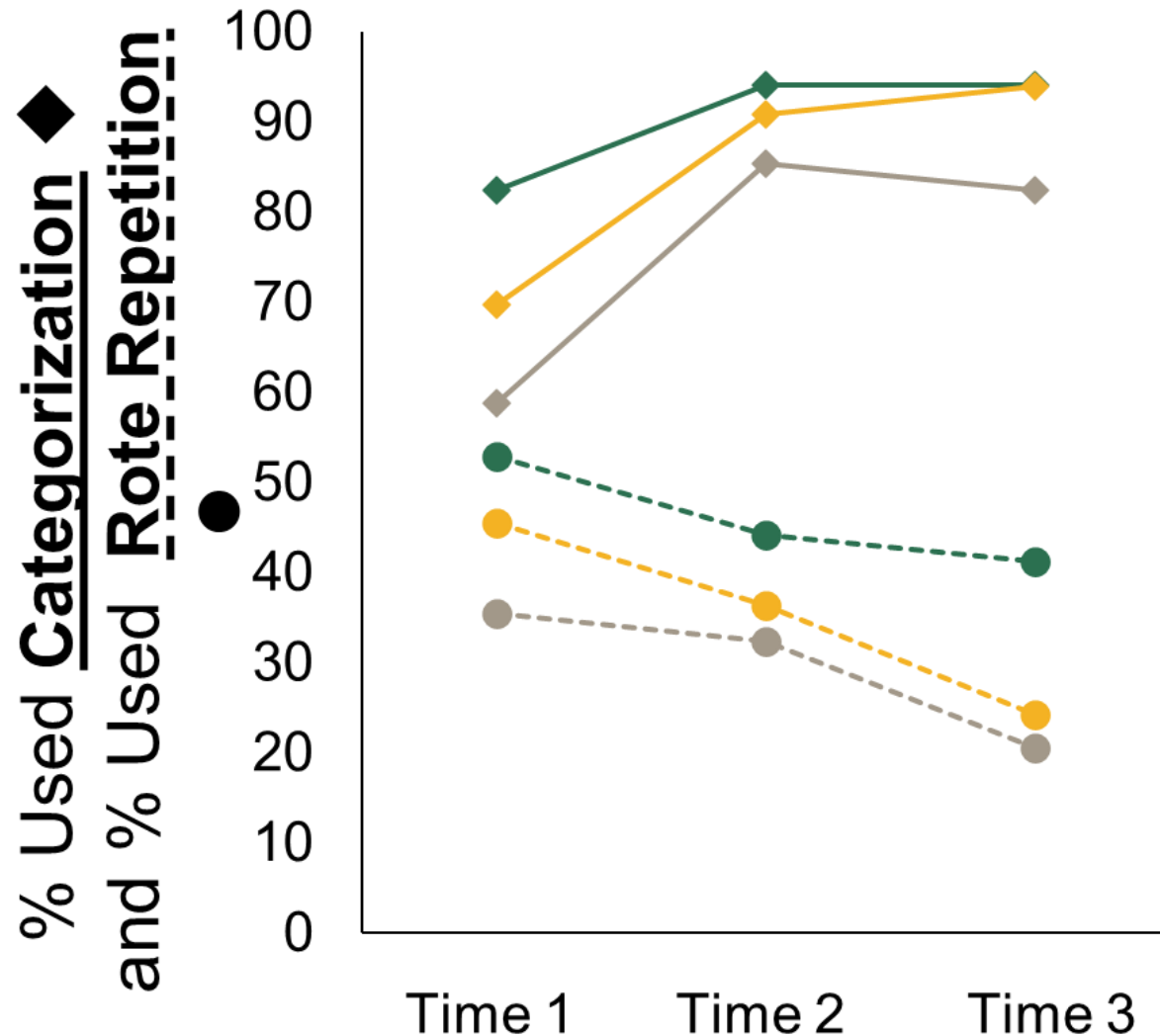
Strategy Use by Condition & Time

Different pattern over time for the groups, $F(2,194) = 2.51$, $p = .044$, $\eta^2 = .05$

Pairing goal-setting and feedback with strategy instruction . . .

★ Better memory performance?

★ More effective strategy use?

★ Greater task commitment?

Summary

★ No evidence of training impact (w/ or w/out goals) on recall
  - ◆ Powered for medium effect size
  - ◆ Sample of university students

★ Training *might* relate to effective strategy use
  - ◆ Coding behavioral indicators of strategy use
  - ◆ Trained vs. not; effective vs. not; same over time?

★ Greater commitment with goals and FB
  - ◆ *But* self-report to the person who provided FB
  - ◆ Possible long-term benefits to performance…

Acknowledgements
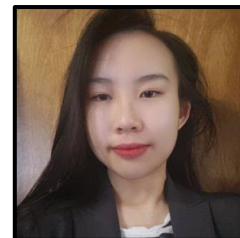
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