

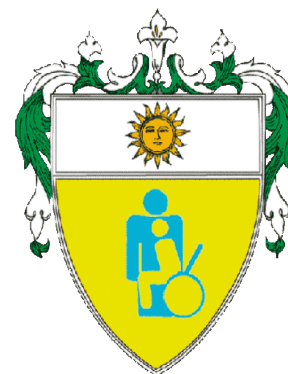


Working on

WORKING MEMORY

Mediating Meaning in Cognitive
Intervention

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#PASPBeyondBorders #PASP2016
#mediatingmeaning #themindfulSLP

roles: attention, working memory,
executive function **1**

2 (briefly) dynamic assessment

mediating meaning
in intervention **3**

#mediatingmeaning #themindfulSLP

COGNITIVE-COMMUNICATION (**COG-COMM**) DISORDERS

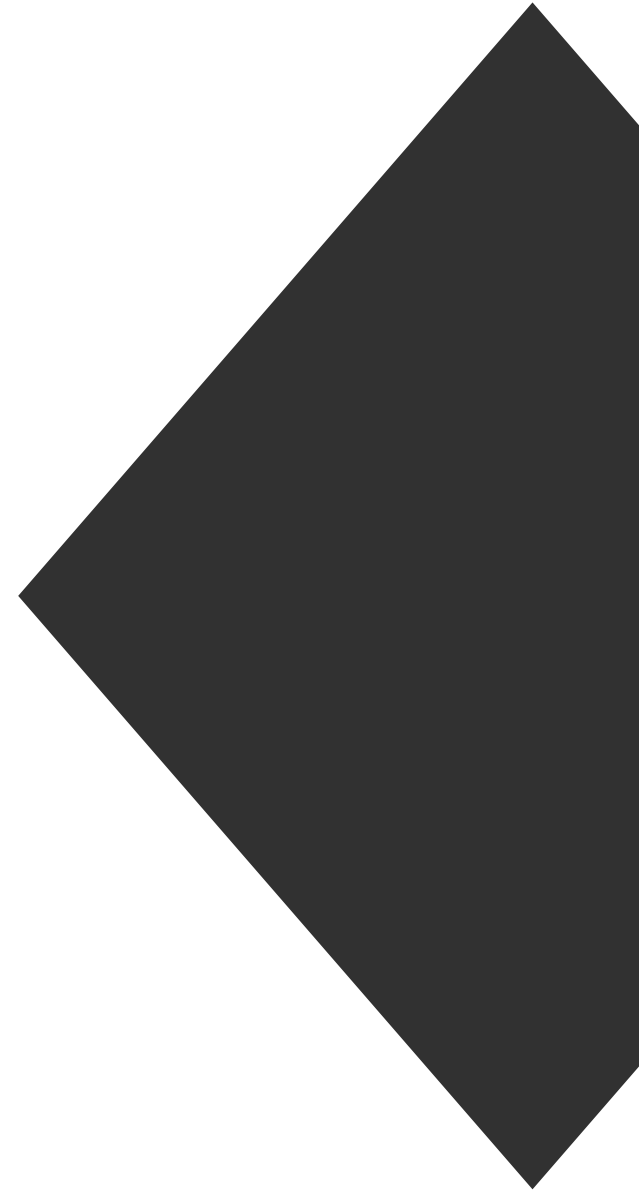


COGNITIVE-COMMUNICATION (**COG-COMM**) DISORDERS

└ executive (**EF**) dysfunction



failures in cognitive control



social
referencing

precision

organization

output

verbal learning
abilities

abstraction

appropriateness

efficiency

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COMMUNICATION

requires **cognitive control**



to coordinate and organize
information



executive function = **MOST VULNERABLE**

COGNITIO N

- Huntington's disease
- Parkinson's disease
- Alzheimer's disease
- frontotemporal lobe degeneration
- primary progressive aphasia



LANGUAGE

K
a r I A
v c B a f N
t G y Z s H w l s t f c y r v
G Z s H w l s t f c y r v
G v B a A' s w

primary instrument

USE something to think and process

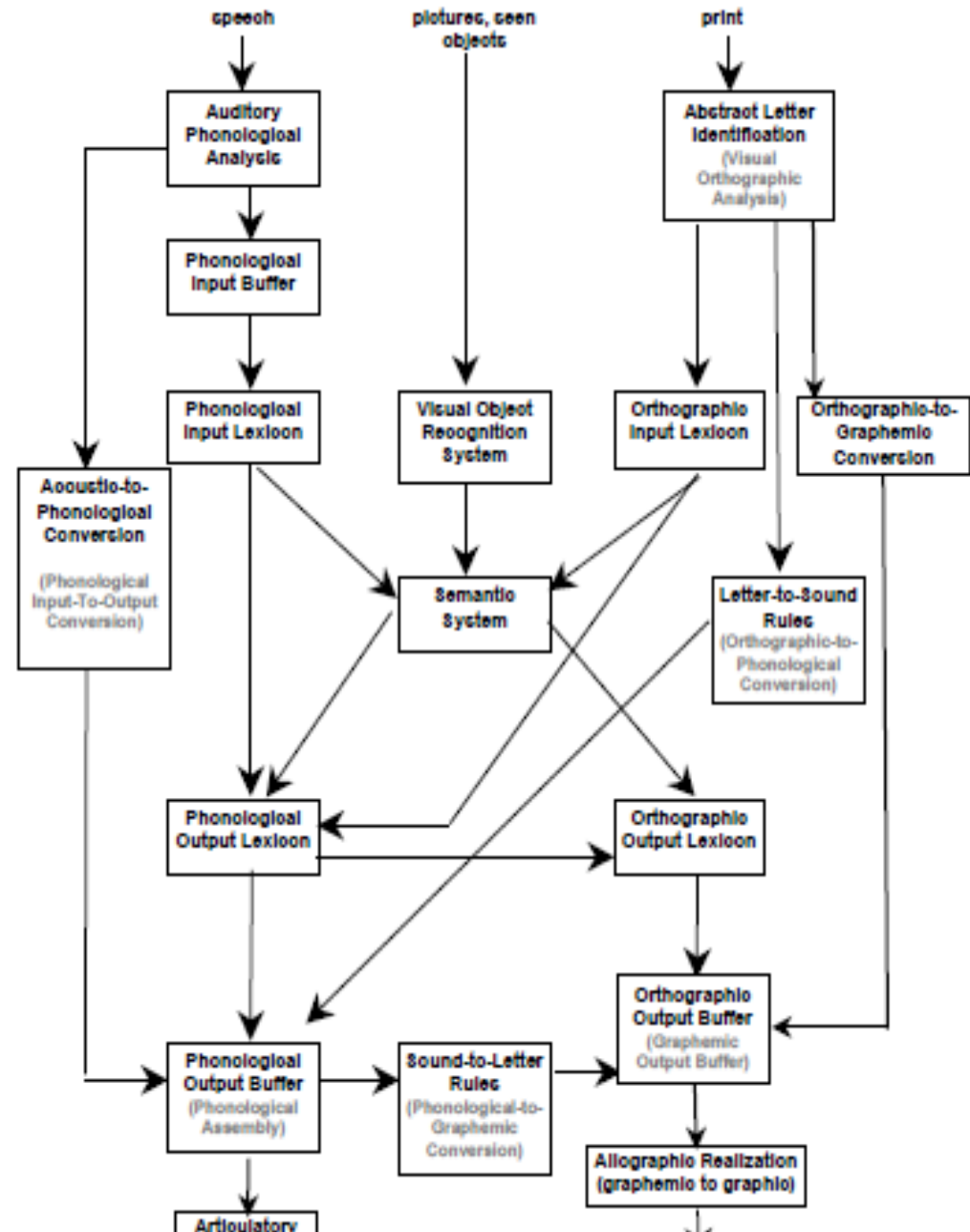
Conceptualization and Thinking



PALPA

- designed for **single words**
- assumes **cognition is intact**

PSYCHOLINGUISTIC ASSESSMENTS OF LANGUAGE PROCESSING IN APHASIA (PALPA)



“
What we intend to do often determines the things to which we desire to attend to”

act of intention

“
To be distracted is to be otherwise attracted... to something else”

conscious decision

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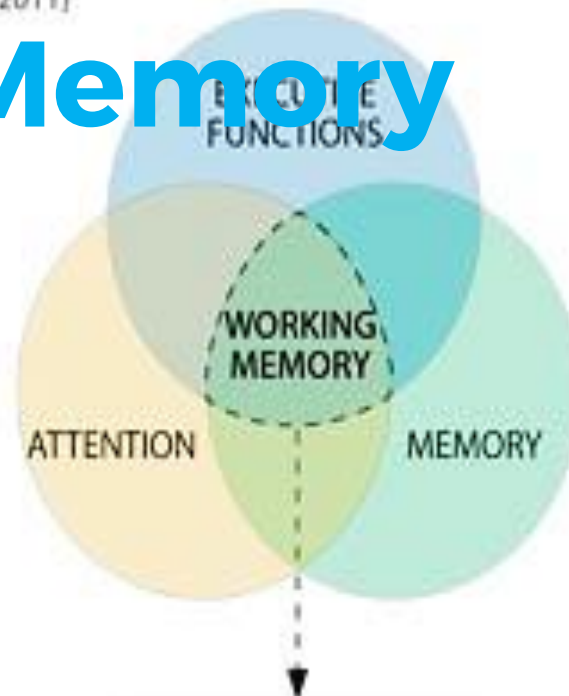
Working Memory

1. maintains (stores) the information you feed into it
2. operates that stored information
3. WM is a limited capacity system



[Purdy, 2011]

Working Memory



INSEPARABLE

**WM and the control of attention are
cornerstone for
higher order thought processes**

	LURIA (1966)	SOHLBERG & MATEER (2001)
LOWER LEVEL COGNITIVE PROCESSES	Anticipation	Initiation and drive <i>(starting behavior)</i>
		Response inhibition <i>(stopping behavior)</i>
	Planning	Task persistence <i>(maintaining behavior)</i>
		Organization <i>(organizing actions and thoughts)</i>
Execution	Generative thinking <i>(creativity, fluency, cognitive flexibility)</i>	
HIGHER LEVEL COGNITIVE PROCESSES	Self-monitoring	Awareness <i>(monitoring and modifying one's own behavior)</i>

What is the best strategy?

Alternatives?

check & modify





ATTENTION



MULTIPLE sources
impaired in **WM** and
simple span tasks

all terms get
overactivated
(fruits AND purple)

Name **fruits**
that are **purple**

inhibiting incorrect names



increases naming latencies

CLIENT with APHASIA:

- ✓ semantic knowledge
- ✗ controlling access



name **fruits**
that are
purple

ATTENTION

problems in **inhibiting**



HUGE PROBLEM in
SPONTANEOUS SPEECH

- ✓ focus attention
- ✓ resist distractions
- ✓ intentionally allocate attentional resources

Metacognitive Activities

1 Understand how they think

2 What makes processing easier or harder

3 Come up with strategies

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What could
be purple?

It can be a
flower, fruit or
vegetable

WM Effort: 6/10
Category Cue

It comes in
bunches

WM Effort:

8/10
Descriptive **Cue no.**

1

Grows on a
vine

WM Effort: 6/10

Descriptive Cue no.

2

You press this
to make **wine**

WM Effort:

5..4..3..2..1
Descriptive Cue no.

3



standardized assessment

basic language
production

comprehension

different **dementias**,
different **decline rates**





Alzheimer's



Primary Progressive
Aphasia

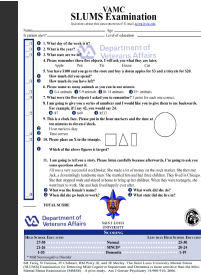
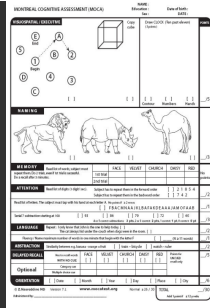


Frontotemporal
Dementia





communicative success
≠
**non-linguistic
cognitive skills / language**



Mini
Mental
State
Exam
(MMSE)

Montreal
Cognitive
Assessment
(MOCA)

Cognitive
Linguistic
Quick Test
(CLQT)

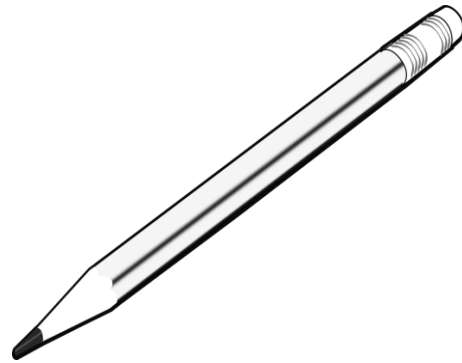
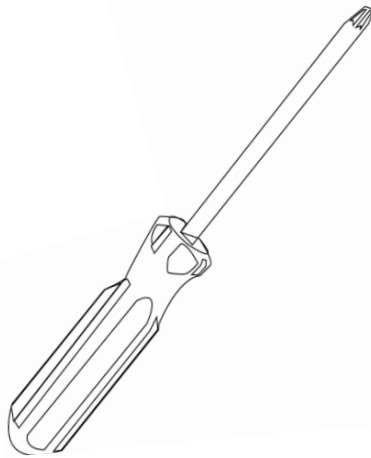
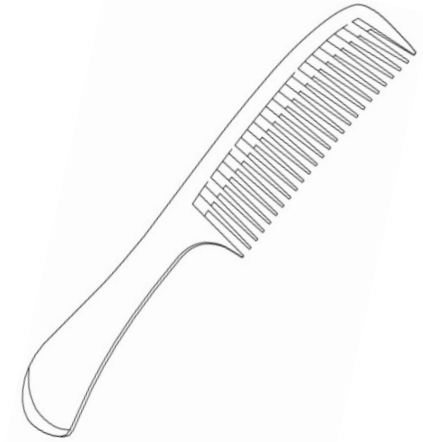
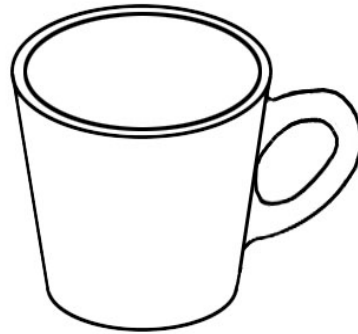
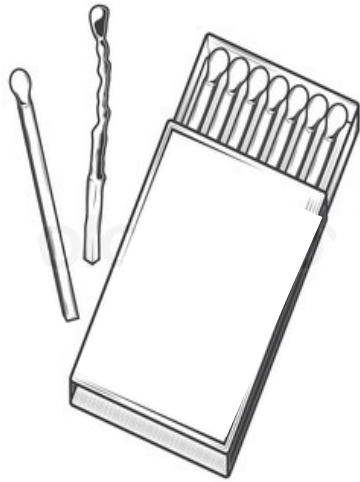
Saint Louis
University
Mental
Status
Examination
(SLUMS)

may be used in
dynamic assessment (DA)



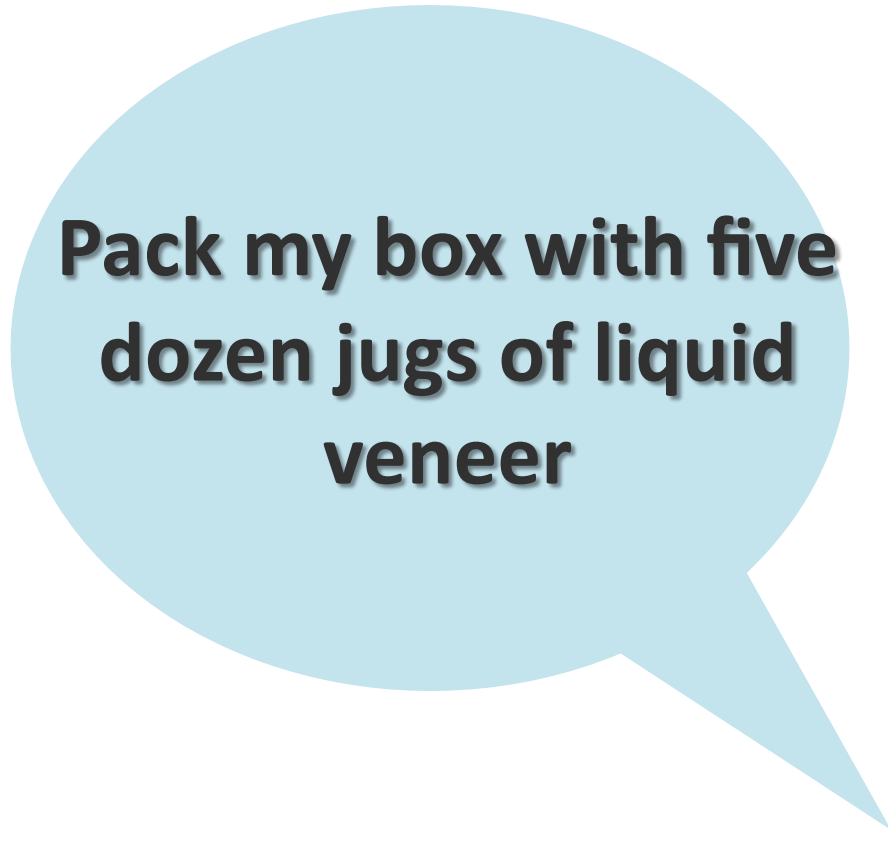
1 standardized
assessment (SA)

2 dynamic
Assessment (DA)





**No ifs and or
buts**



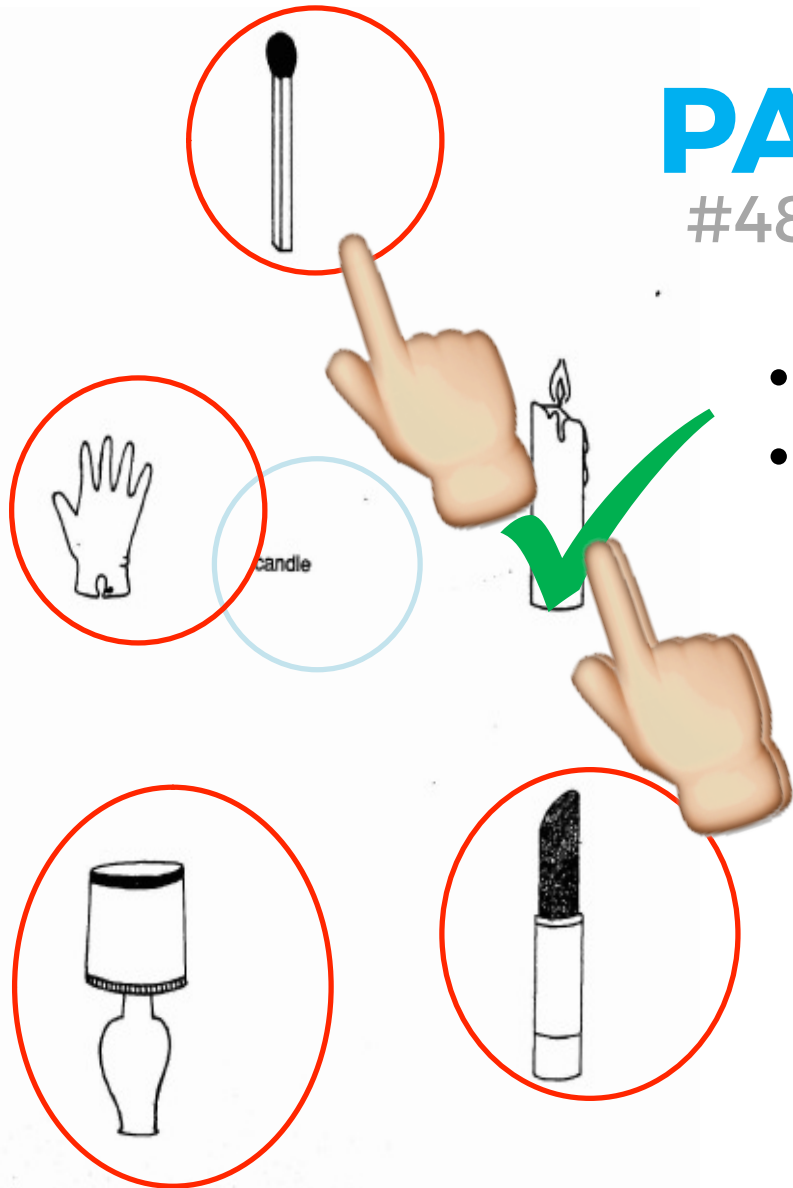
**Pack my box with five
dozen jugs of liquid
veneer**

**Sixty two...and... a
half**

**He is NOT...
coming back**

PALPA subtests

#48 Written Word-Picture Matching

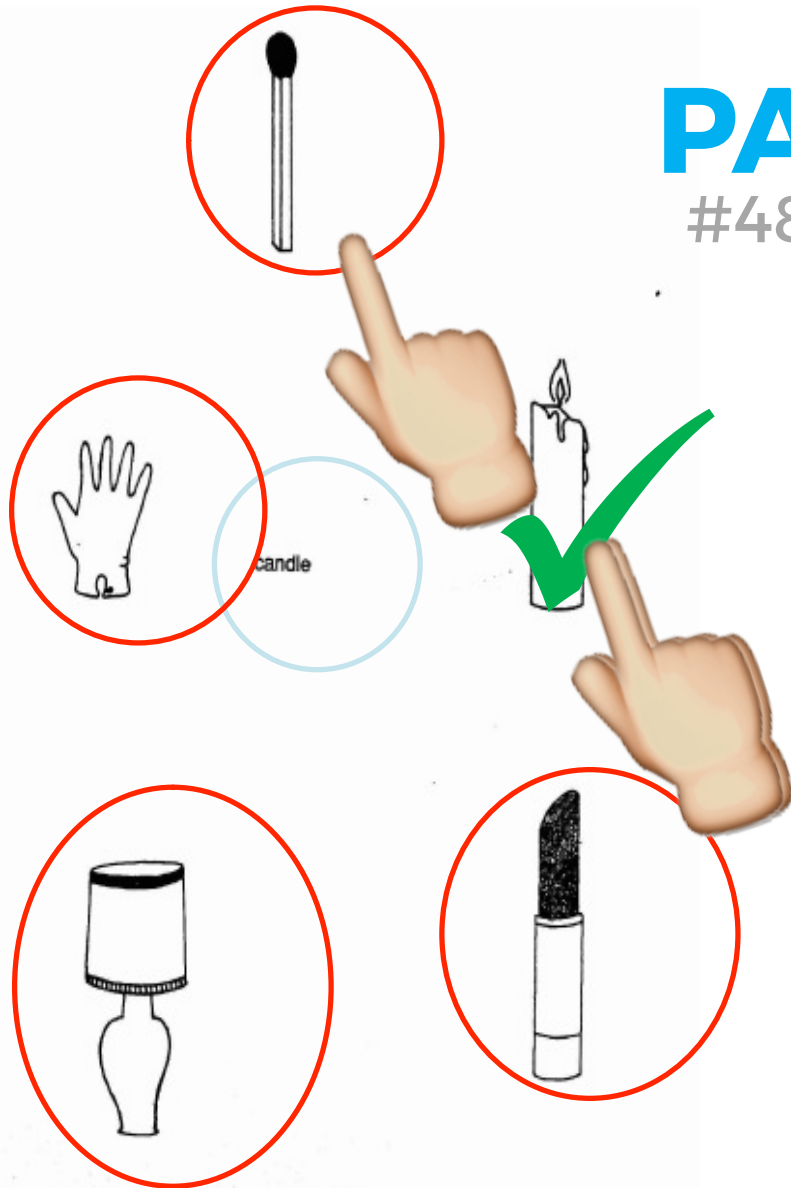


- *semantic comprehension abilities*
- **SA:** Administer as is
- **DA:** identify first the breakdown

Gesture + Phonemic Cue

PALPA subtests

#48 Written Word-Picture Matching



PROCESS FURTHER

PROCESS MORE

Acknowledge

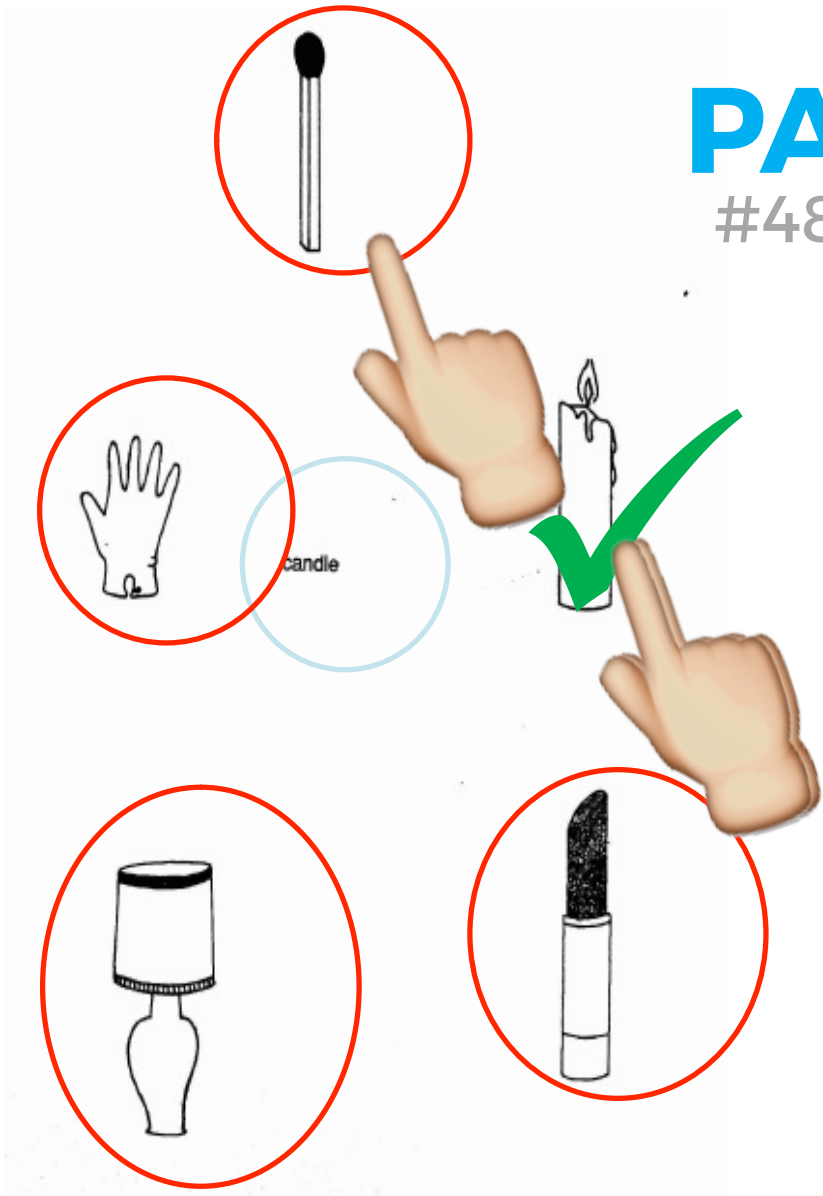
SUMMARIZE

PALPA subtests

#48 Written Word-Picture Matching

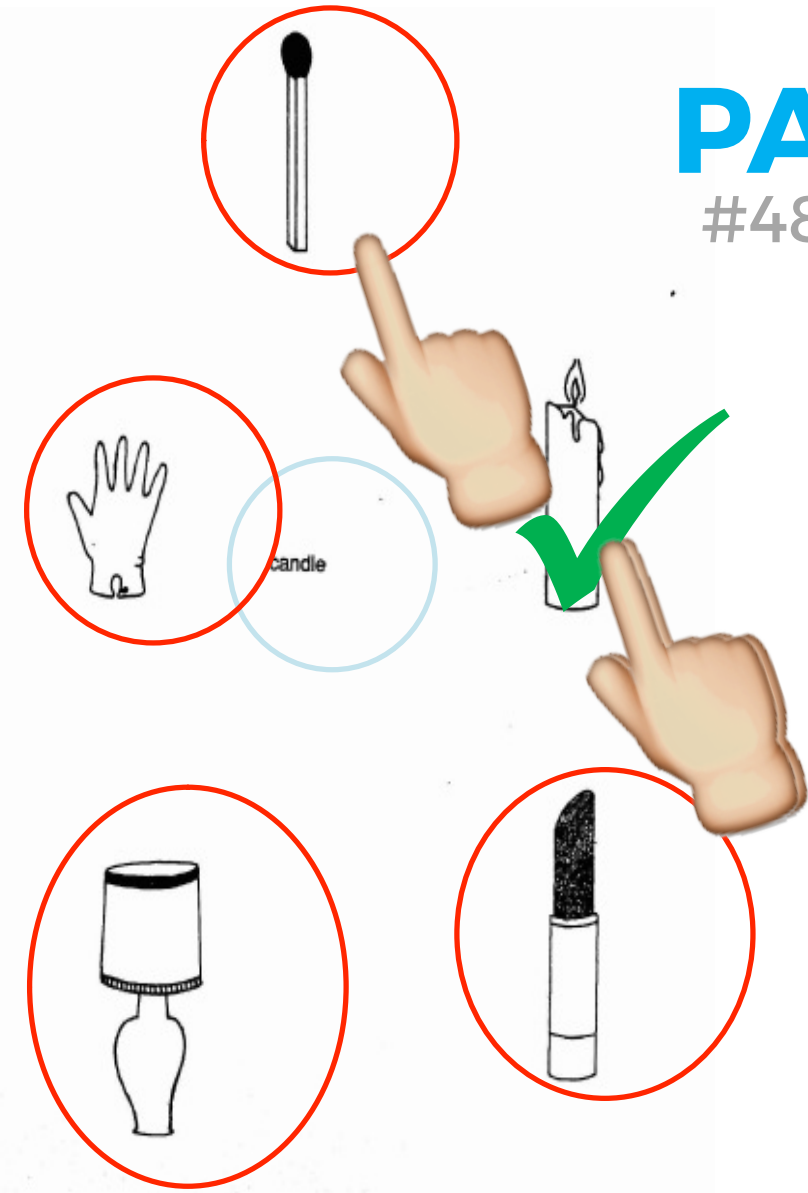
- What did the entire process tell you?
- What were the breakdowns?

“Why was this difficult?”



PALPA subtests

#48 Written Word-Picture Matching



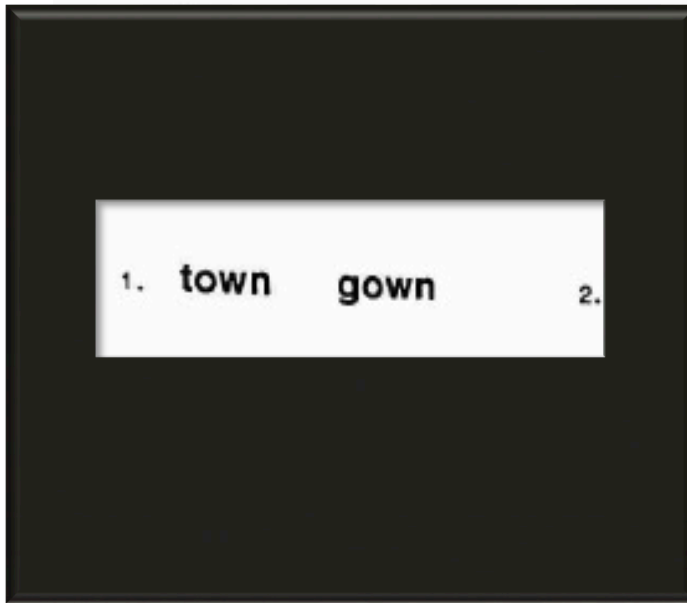
Disequilibrium:

Mess up with your client's head

Reading Task

Name: _____ Date: _____

Please Tick the Words that Rhyme



- | | | |
|-----------------|----------------|----------------|
| 1. town gown | 2. use force | 3. cheat sweat |
| 4. two | 5. cow | 6. paw hour |
| 7. tweak freak | 8. ghost roast | 9. pool wool |
| 10. match hatch | 11. fall shall | 12. pool wool |
| 13. match hatch | 14. wart fort | 15. flair year |



choose your stimuli very
well

Identify action word within a short sentence (**EASY**)

- ✓ a **familiar/typical** action within a sentence
- ✓ action word/verb is in the **initial position**
- ✓ **short** sentence



“Walk to the store.”

Identify action word within a short sentence **(MEDIUM)**

- ✓ a **familiar/typical** action within a sentence
- ✓ action word/verb is in the **2nd position** (preceded by 1-2 words)
- ✓ Length: **5-8 words**



“Could you scrub the floor upstairs?”

By number of **information units**:

- *She was a doctor.*
- *They had fish for dinner.*
- *The rock music was loud.*
- *They bought cheese bread and Spanish rolls.*

“The store sold boots, shoes, and sandals.”

- *The outlet store sold rubber boots, leather shoes, and plastic sandals.*
- *The bigger outlet store sold black rubber boots, tan leather shoes, and pink plastic sandals.*
- *The 3rd biggest outlet store sold heavy black rubber boots, soft tan leather shoes, and tacky pink plastic sandals.*

???



- ✓ length
- ✓ frequency
- ✓ imageability
- ✓ probability / plausibility
- ✓ abstraction level

EASY

Are letters mailed? Are razors soft?

*Do some people brush their hair?
Is money carried in a wallet?*

MEDIUM

*Are pants worn on your arms?
Does a blanket keep you cool?*

Do you use flyswatters to catch mice?

Does a meteorologist predict your horoscope?

HARD

COMPARATIVES:

*Is a feather lighter than a bird?
Is a sandwich thinner than a cracker?*

Is a Big Mac thinner than Skyflakes?

On

COMPARATIVES.

1. Make the stimulus more meaningful and salient

- ✓ auditory memory
- ✓ auditory sequencing
- ✓ auditory processing
- ✓ auditory

Is night darker than day?

Night, darker than day?

Which is darker: night...? Or day...?

Night is... darker? Day is...darker?

ansion

Attention, WM, EF

On

COMPARATIVES.

2. Make one referent **CONSTANT**.

- ✓ prime
- ✓ keep the target constant
- ✓ note concrete & abstract concepts
- ✓ imageability
- ✓ frequency

*“Is a **German Shepherd** bigger than...?”*

*“Is a **German Shepherd** smaller than..?”*

*“Is a **German Shepherd** heavier than...?”*

On

COMPARATIVE

2. Make one refer

- ✓ prime
- ✓ keep the target constant
- ✓ note concrete & abstract concepts
- ✓ imageability
- ✓ frequency

easier: Which is heavier:
*refrigerator or
mug?*

harder: Which is taller:
teacup or mug?

easier: Which is heavier:
pot or mug?

harder: Which is taller:
*pressure cooker or
mug?*

On

COMPARATIVES.

2. Make one referent **CONSTANT**.

- ✓ prime
- ✓ keep the target constant
- ✓ note concrete & abstract concepts
- ✓ imageability
- ✓ frequency

EASIER	DIFFICULT
Bigger-smaller	Rougher-smoother
Longer-shorter	Cheap-more expensive
Higher-lower	Wetter-drier
Faster-slower	Louder-softer
Colder-hotter	Thinner-thicker
	Harder-softer

vascular dementia

moderate to severe
jargon

(mostly) appropriate
social skills



The Case of Mrs. E

d_t_rg_nts:

Br__z_

Ar__l

T_d_

S__f

The Case of Mrs. E



deload her WM?

shifts to **intentional**
focus?

The Case of Mrs. E

*“We are called to make our clients’
interests OUR interests”*

bank manager
The Case of Mrs. E

	Savings	Current	Time
min initial deposit	-	-	1,000
min maintaining balance	5,000	10,000	-
interest earning balance	100,000	100,000	-
interest rate	0.125% p.a.	0.125% p.a.	market rates

2-3 picture stimuli? **THAT'S OKAY**

1: PRIME

2: FAMILIARIZE

3: EXPAND

“What else can go with them?”



“How...?”

“Can I?”

“Why not...?”

talk about similarities

talk about differences

abstract associations

Workbooks

≠

should not become your crutch

GUIDE BOOKS

Comparing and Contrasting

Task P: Identifying Reasons for Associations, *continued*

Why do *draw* and *write* go together?

Tempting to formulate just ONE association?

17. Why do *heart* and *valentine* go together?

NEVER be satisfied with one answer

18. Why do *potato chips* and *pretzels* go together?

Go BEYOND THE OBVIOUS

OBVIOUS ANSWER:

Because they both use a pencil / pen.

Because you use your hand to draw and write.

Because you mark paper with a pencil / pen when you draw / write.

NOT SO OBVIOUS ANSWERS:

Because drawing and writing are ways of expressing one's thoughts.

Because drawing and writing are forms of communication.

Any writing tool can be used to draw or write, such as a pencil, pen, marker, crayon, chalk, paintbrush...

PACE

Promoting Aphasics' Communicative Effectiveness

- facilitate the use of conversational skills
- clinician and the pt take turns in guessing

#mediatingmeaning #themindfulSLP



- Dr. B
- 60:0
- Non-fluent aphasia, verbal apraxia
- Unable to phonate (even /m/)
- WM fails on linguistic tasks (esp. multiple tasks)



**to communicate to me
what he is looking at in the picture**

client who:

-is more fluent

-is slightly better

at word retrieval

-has learned to do

metacognition



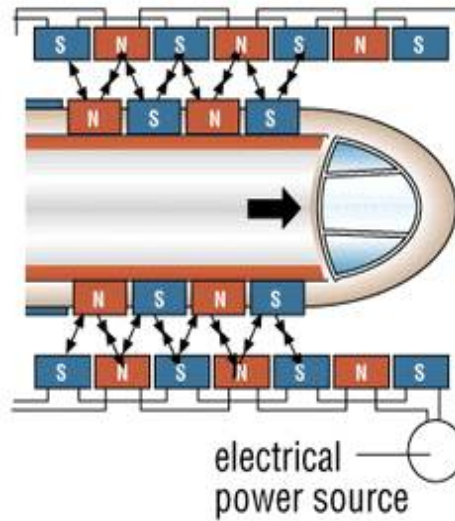
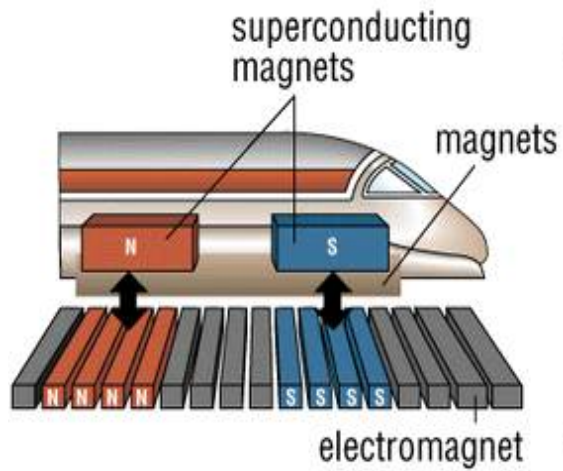
Gain more meaning and understanding

Literal → interpretive concepts

*“Which one is faster:
train or airplane?”*

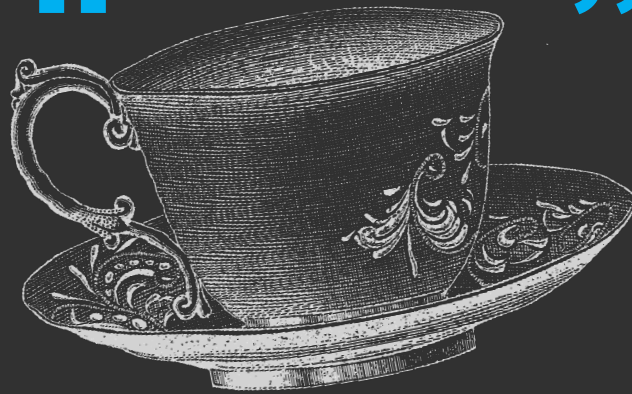
“Airplane.”

“Wait, I think pwedeng train.”



“

”



-Dr. Reuven Feuerstein

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SHOW and MEDIATE for the client...

If you don't give the client direction,

he may not see meaning in intervention.



adult

What can you do to mediate meaning?

How should you think about

intervention?

*wants to be shown towards what has
How can you be a more mindful
meaning for him...*

clinician?





Working on

WORKING MEMORY

Mediating Meaning in Cognitive
Intervention

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