

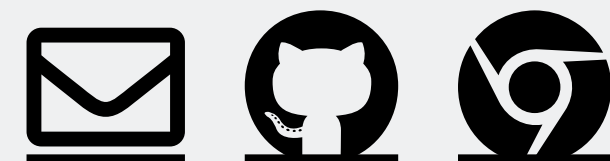
# Second Language Acquisition

**LG 376 — Semester 2, 2021 (Jan-May 2022)**

**CLASS 9: COGNITION**

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**Sakol Suethanapornkul**



# Outline

- Recap: First half of the semester
- Cognition
  - Information processing in SLA
  - Skill acquisition in SLA
- Google Scholar search
- Looking ahead: Week 10

The word "Recap" is centered within a large, horizontally-oriented rounded rectangle. The rectangle has a thin black border and a light gray fill. The text "Recap" is rendered in a bold, sans-serif font with a color gradient from pink to red.

Recap

# SLA mid-semester party 🎉

Match the authors with their photos and topics?



1. Bilingual turn in SLA

2. Age in FL contexts

3. Pushed output

4. Interaction

5. Transfer

6. Fundamental difference

7. Monitor model

8. Noticing

9. Practice

10. Interlanguage

1. DeKeyser

2. Bley-Vroman

3. Swain

4. Ortega

5. Selinker

6. Long

7. Schmidt

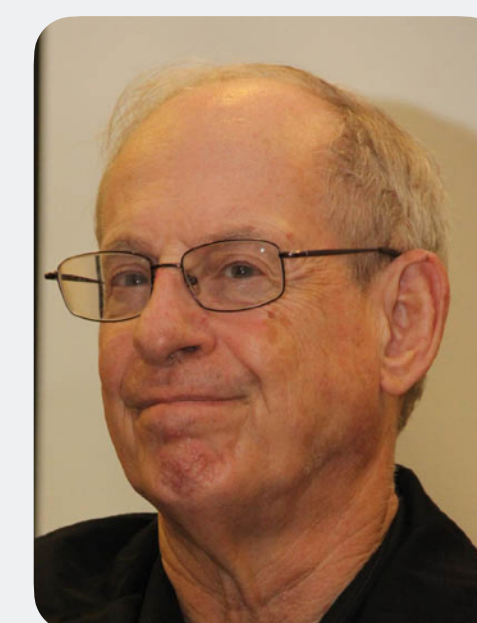
8. Muñoz

9. Krashen

10. Jarvis



# SLA mid-semester party 🎉



# Mid-semester review

Successful L2A depends on a host of factors. We have discussed:

- age
  - rate of learning: adults vs. children
  - ultimate attainment: early starters vs. late starters
- crosslinguistic influences (or transfer)
  - interlanguage & developmental sequences
  - L1-L2 similarities & differences

# Mid-semester review

Successful L2A depends on a host of factors. We have discussed:

- linguistic environment
  - input: comprehensible input, modified interaction
  - output: pushed output & language production
  - noticing (Wes' IL development)
  - usage-based approaches: frequencies

# Cognition



# Setting the scene...

- The term **cognition** from Latin → “to get to know”
  - SLA research asks *what* it takes to get to know an L2/Ln well
  - Methods & tools come from psychology & neuroscience
- Major challenges:
  - Differentiate between processing of known and novel L2 information
  - Methods and evidence (RTs in milliseconds, blood oxygenation, etc.)



# Setting the scene...

- Investigating L2A is just as hard as monolingual L1A
  - Positive evidence vs. negative evidence (?)
    - A simple example: Put the adverb *often* into the sentence *I drink coffee*
  - The logical problem of language acquisition (in L1A)
    - Language seems logically unlearnable
    - How can we explain the fact that all children learn it?
- UG, emergentism, and many things in between

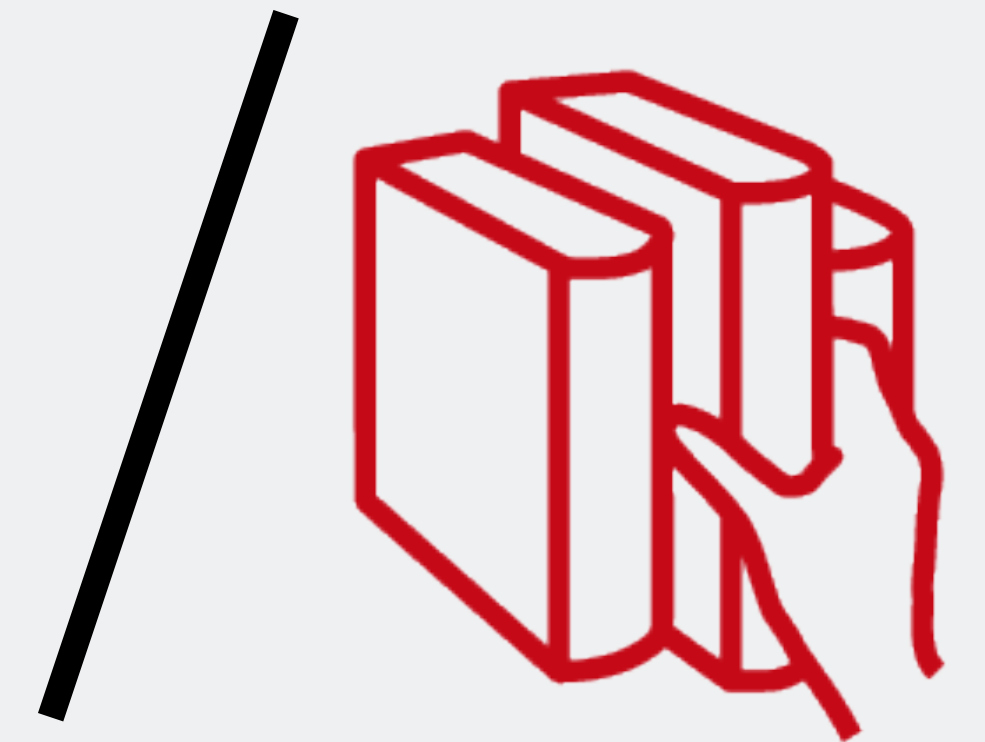
# Information processing in SLA

- Human mind is a **symbolic processor** engaging in mental processes
  - Mental processes cause human behavior
    - Analogy: CPU and not keyboards or mice
  - Cognition has limited capacity/resource
    - Memory and attention are limited
    - Think: Netflix and SLA lecture at same time



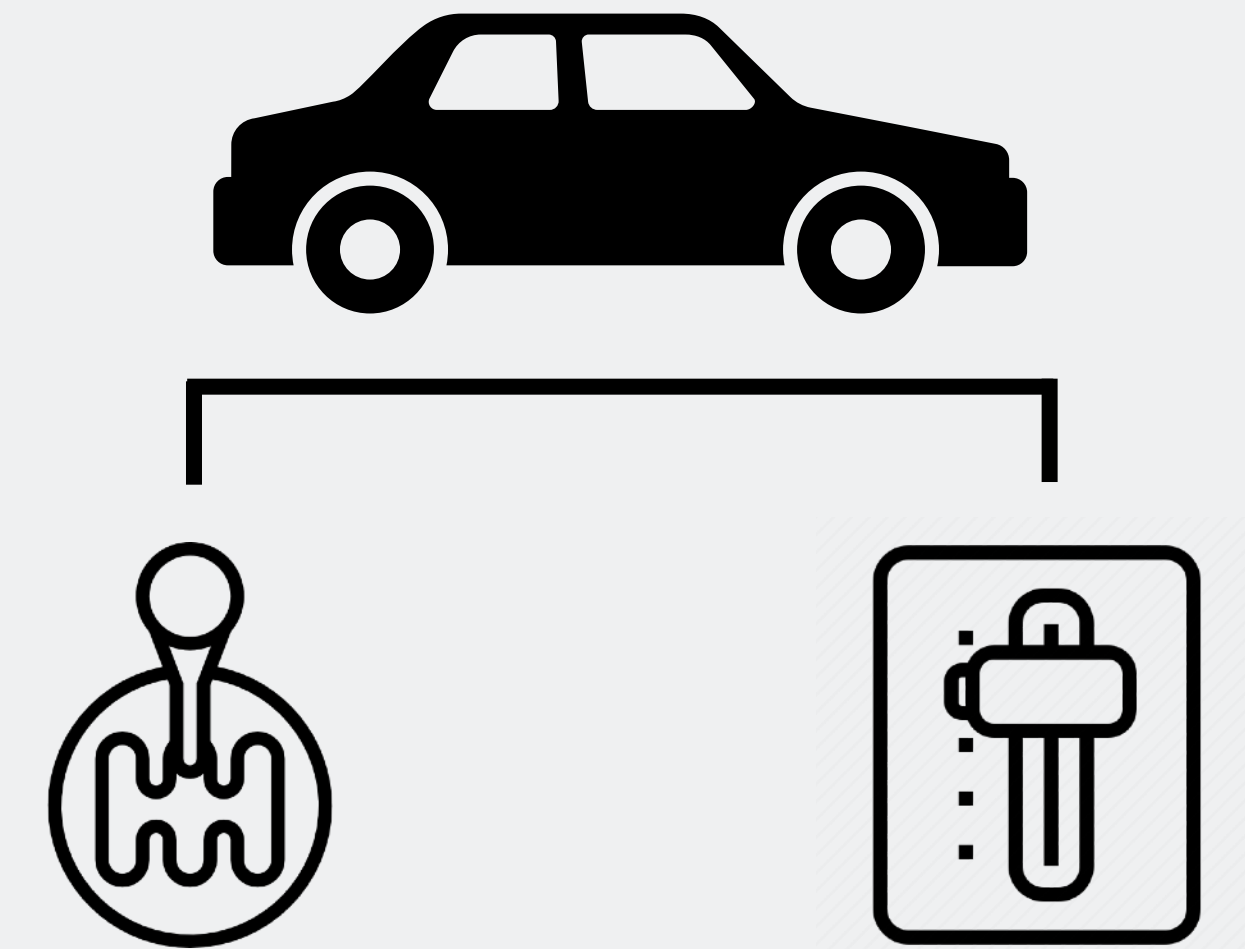
# Information processing in SLA

- Two central tenets:
  1. Cognitive architecture is made up of
    - **representation** (knowledge)
    - **access** (processing)



# Information processing in SLA

- Two central tenets:
  1. Processing is automatic
  2. Processing comprises of
    - **automatic** (fluent): little resources, parallel
    - **controlled** (voluntary): effortful, serial



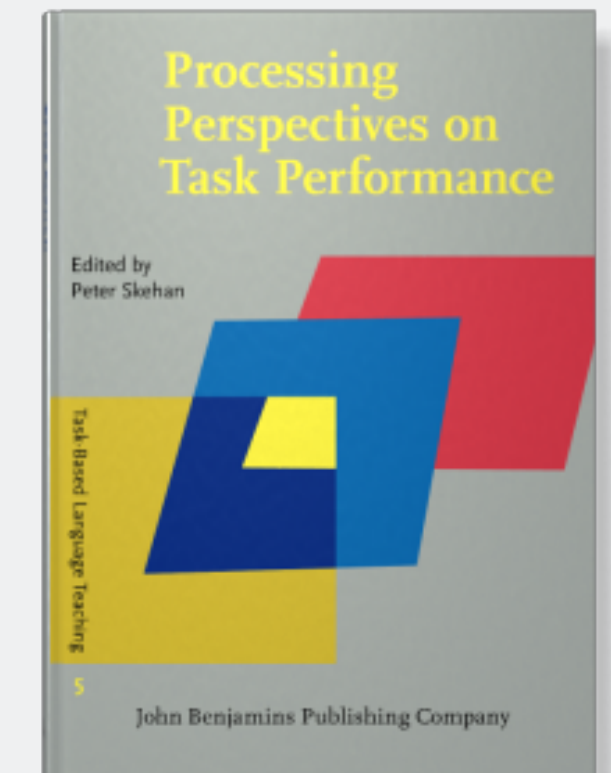
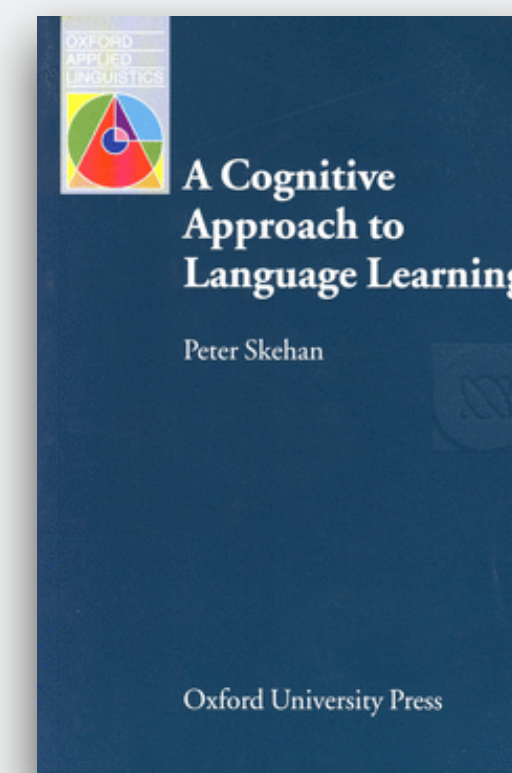
**Question:** Which conversation(s) require more/less controlled processing?

(1) with friend in L1; (2) with foreigner in L2; (3) with a stranger in loud party

# Information processing in SLA



- **Trade-off effects:**
  - *When making efforts to say something complex that calls for the retrieval of an L2 word or structure that we recently learned, we may suddenly become less fluent and we may make more errors in our delivery*



# Skill acquisition theory in SLA



- Learning: performance goes from controlled to automatic
  - Transformation happens through relevant practice
  - **Proceduralization** or **automatization**
    - **Declarative** or **explicit knowledge** (*knowledge that*)
    - **Procedural** or **implicit knowledge** (*knowledge how*)

Question: Can you state how to:

(1) drive a car;    (2) play an instrument;    (3) describe an event in the past?

# Skill acquisition theory in SLA



- “Practice makes perfect!”
  - Begin with a declarative knowledge via explicit explanations
  - Engage learners with *sustained* and *deliberate* practice
- Practice helps with future access (less effort, more automatic)
- Final outcome: **automaticity**
  - Fluent, automatic language performance + procedural knowledge



# Skill acquisition theory in SLA



- Practice is subject to the **power law of learning**
  - Once optimal performance is reached, improvement will level off
  - Practice no longer yields large return

- In Psychology:

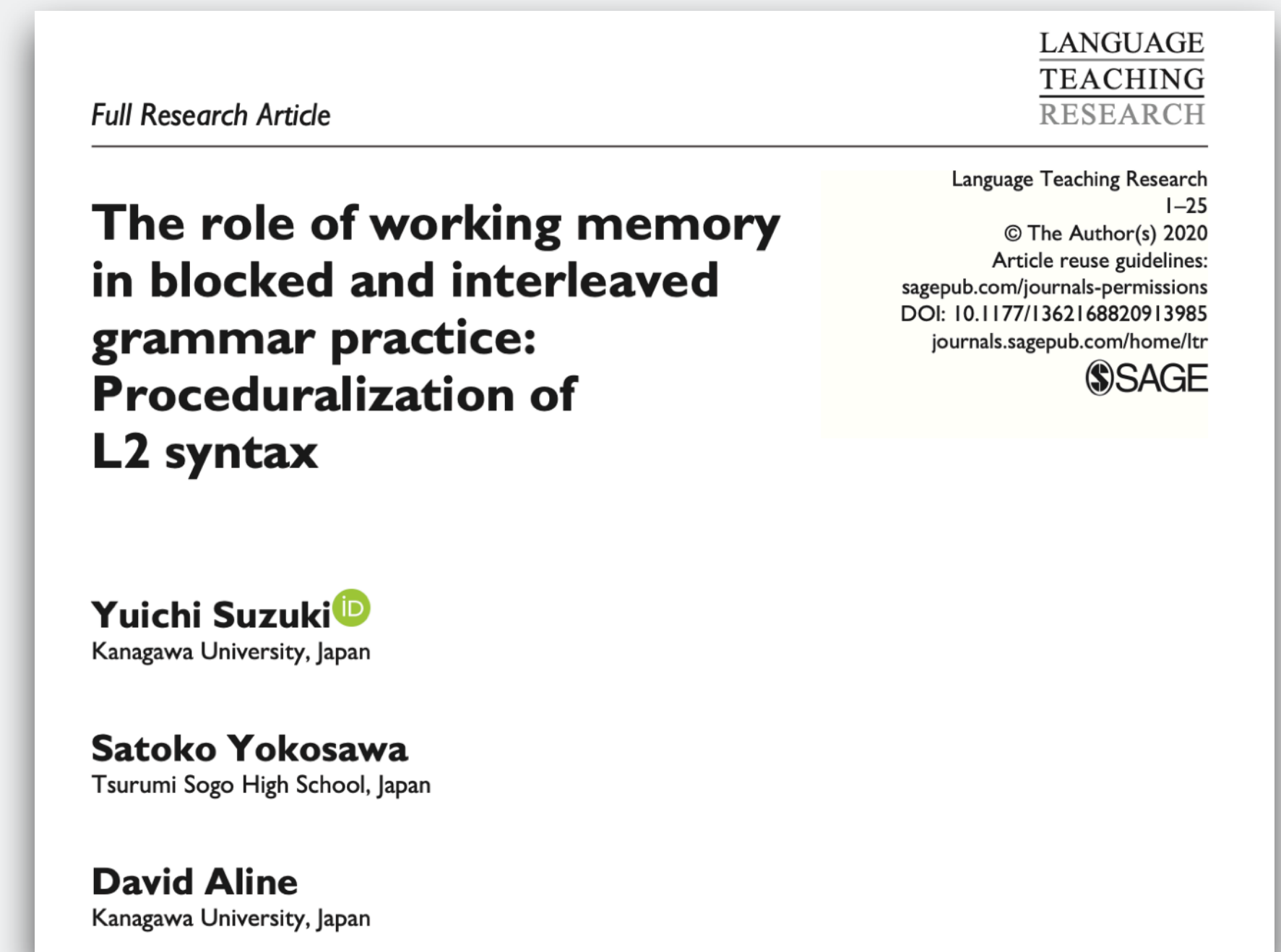


# Skill acquisition theory in SLA

- What practice is best? At a micro level (i.e., lessons)
  - **distributed** practice (over sessions with intervals of rest) is better
    - **blocked** practice (AAA, BBB, CCC)
    - **interleaved** practice (ABC, ABC, ABC)
    - interleaved and longer-spaced practice (once a week of ABC)
- Desirable difficulties (confusion over new materials at new session)
  - More error + forgetting retrieval of materials in L2 knowledge

# Skill acquisition theory in SLA


- Suzuki et al. (2020) compared interleaved against blocked practice in a picture description task
  - 5 RC constructions
  - That's the boy **who** is washing the dog
  - That's the cat **which** is watching the bird
  - That's the girl **whom** the cat is watching
  - ....



# Skill acquisition theory in SLA


- In Suzuki et al. (2020), participants practiced 50 times (10 verbs per RC)

That is the girl...



→

That is the girl whom the cat is watching.



**Blocked Practice**

RA-where	RA-where	RA-where	RA-where	RA-where	RA-where	RA-where	RA-where	RA-where	RA-where
SR-who	SR-who	SR-who	SR-who	SR-who	SR-who	SR-who	SR-who	SR-who	SR-who
SR-which	SR-which	SR-which	SR-which	SR-which	SR-which	SR-which	SR-which	SR-which	SR-which
OR-whom	OR-whom	OR-whom	OR-whom	OR-whom	OR-whom	OR-whom	OR-whom	OR-whom	OR-whom
OR-which	OR-which	OR-which	OR-which	OR-which	OR-which	OR-which	OR-which	OR-which	OR-which

**Interleaved Practice**

SR-who	SR-which	OR-whom	OR-which	RA-where	OR-which	SR-who	OR-whom	SR-which	RA-where
SR-who	OR-which	OR-whom	SR-which	RA-where	SR-who	SR-which	RA-where	OR-which	OR-whom
SR-which	SR-who	RA-where	OR-which	OR-whom	SR-which	OR-which	SR-who	OR-whom	RA-where
SR-who	OR-whom	OR-which	SR-which	RA-where	SR-which	RA-where	SR-who	OR-which	OR-whom
SR-who	OR-whom	SR-which	RA-where	OR-which	SR-who	SR-which	OR-whom	OR-which	RA-where

- More accurate performance on both immediate and delayed posttests for the interleaved group

# Google Scholar search

# Searching on Google Scholar

- Google Scholar is a free academic search engine
  - search: repositories of publishers, universities, or scholarly websites
  - retrieve: journal & conference papers, academic books, pre-prints, theses & dissertations, technical reports, court opinions & patents, etc.

# Searching on Google Scholar

## Pros:

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- Searches a wide range of outputs
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## Cons:

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- Unreliable citations
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# Next week...

- **Topic:** Cognition (continued)
  - What roles does memory play in L2 learning?
  - How many “kinds” of memory are there?
- **Reading:**
  - USLA (5.5, 5.6, 5.7, and 5.8)
    - 5.5 = Long-term memory; 5.8 = L2 vocabulary knowledge in long-term memory
    - **Quiz #3** from **9:30 to 9:45** (3 questions; 6 points total)