

## Critical Appraisal Form

Date: 17-Feb-21

Members in Discussion: 5

Article: Leonard, L., Deevy, P. (2020). Retrieval Practice And Word Learning In Children With Specific Language Impairment And Their Typically Developing Peers. *Journal of Speech, Language, and Hearing Research*, 63, 3252-3262.

### Summary:

Existing research on word learning for children with SLI, and retrieval practice is summarized. 4 experiments are then described: Participants are 4;3-5;11, with 10-16 typically developing (TD) children, and 10-16 children with SLI per experiment.

*Experiment 1:* Repeated retrieval compared to repeated study (RS). 8 novel words taught with repeated spaced retrieval (RSR) and with RS. The learning of word form, word meaning, and word recall were tested immediately and one week post. Effect size was large, favoring the RSR over the RS. Children's retention did not decline from immediate testing to one-week post.

*Experiment 2:* RSR compared to retrieval. 12 novel words taught. Addition of ERP (Measurement of neural amplitude showing spectrum of learning- *Experiment 3*) within this experiment. RSR condition yielded better retention outcomes than the repeated retrieval condition.

*Experiment 4:* Generalisation of 8 novel adjectives taught. RSR versus RS, plus a generalization component. Stable retention at 5 min and one week post. RSR benefited learned items and generalised items. SLI group just as responsive as TD to the RSR condition, retaining and generalizing words.

### Strengths and Limitations of research article:

- More research needed with practical conditions for applicability
- Ceiling effects resulted at times
- Encouraging evidence as basis has well researched credibility

	Compelling	Suggestive	Equivocal/Uncertain
Validity		X	
Clinical importance		X	

### Clinical Implications/Discussion:

- Repeated spaced retrieval procedures resulted in stronger recall of word form and meaning. Additional research is warranted in more naturalistic clinical contexts to further demonstrate the efficacy of word learning procedures that include RSR.
- Results for generalization and retention one-week post for both SLI and TD children are encouraging.
- Clinicians questioned how the encoding piece of word learning, known to be more difficult for children with SLI, would play a role.
- One clinician had already been focusing on retrieval in her practice and others planned to increase their application of the general principal of retrieval. Teaching the concept to parents and teachers was also discussed.
- It was discussed that more significant applicable outcomes for SLP's might result if grammatical morphemes were targeted (versus nouns and adjectives).
- Clinicians agreed they would like more information on optimal number of words for retention, spaced retrieval schedules, results in light of PA skills, and results over a longer duration of retention.

