

SPLH 466 Sample Article Report

Storkel, H. L., Armbruster, J. & Hogan, T. P. (2006). Differentiating phonotactic probability and neighborhood density in adult word learning. *Journal of Speech, Language, and Hearing Research, 49*, 1175-1192

1. Purpose(s) or goal(s) or research question(s) –

Investigate contribution of phonological and lexical reps to word learning by examining effect of neighborhood density (ND) and phonotactic probability (PP) on adult word learning.

Secondary goal = determine which aspect of word learning influenced by each: triggering vs. integration.

2. Participant information --

32 normal college students

3. Independent variable --

Phonotactic probability of words to be learned – likelihood of occurrence of sounds – low vs. high

Neighborhood density of words to be learned – number of words that sound similar – low vs. high

Amount of exposure to the words – 1 vs. 4 vs. 7 exposures – i.e., learning was tracked over time/exposures

4. Dependent variable (what outcome was measured) –

Proportion correct – partially correct & completely correct

5. Procedure/task overview --

Stimuli were delivered via computer. Session started with baseline test. Participant shown nonobject and asked to guess name. Then, participant listened to story showing the nonobjects while the nonword was played auditorially. Participants were tested in same picture naming task as baseline. Story and naming repeated two more times for a total of 3 presentations and tests. Then, 2nd story administered following same procedures.

6. Analysis approach (descriptive, statistical) –

Effect of PP, ND, and exposure on (1) partially + completely correct responses; (2) partially correct responses only; and (3) completely correct responses only -- analyzed

using repeated measures ANOVA [2 PP x 2 ND x 3 Exposures]

Results also shown in 4 figures (2 for completely correct and 2 for partially correct responses – each figure examines PP or ND effect across exposures)

7. Results (main findings: how did the independent variable affect the dependent variable) –

Low > High phon prob (observed in full analysis and partially correct analysis)

High > Low neigh density (observed in full analysis and completely correct analysis)

Later > Earlier exposures (observed in all analyses)

8. Conclusion (take-home message; what did we learn from this study) –

Phon rep (e.g., phon prob) involved in detecting new word and triggering learning (i.e., early word learning)

Lex rep (e.g., neigh den) involved in stabilizing a new rep (i.e., later word learning)

9. How does this research inform clinical practice –

Suggests that assessments of word learning might need to consider the PP and ND of the words being tested because this could tap different stages of word learning (e.g., early vs. late)

Suggests that manipulating PP or ND in treatment could help facilitate word learning.

Suggests that High PP or Low ND words could be difficult to learn in academic subjects so these types of words might require greater instruction/exposure for a student to achieve mastery.