

## The effect of diversity on how children learn words from reading

Previous research has found that contextual and word diversity affect how children learn words from reading. We extend this research by investigating the influence of reading various types of complex words under different diversity conditions.

The effect of contextual diversity, that is, words having different meanings in different contexts (e.g., financial *bank*, river *bank*), was studied in Grade 4 children by Perea, Soares, and Comesaña (2013), and in university students by Jones, Johns, and Recchia (2012). Participants in these experiments identified novel non-words faster (Jones et al., 2012), and distinguished real words from non-words faster (Perea et al., 2013) after reading words in multiple contexts, compared with words read more frequently but in only one context.

Quémart and Casalis (2012) found that word diversity also influences novel word learning. French-speaking children in Grades 3 and 5 read base non-words (e.g., *claise*) alone or with derived complex forms (e.g., *claiser*). Children in Grade 5 (but not Grade 3) were more accurate at spelling the base when they also read diverse forms. Pacton, Foulin, Casalis, and Treiman's (2013) similar study found that Grade 3 and 5 children benefited from reading derived complex forms of a non-word. However, in both studies, the diverse condition featured complex non-words meaningfully related to the base. Therefore, it cannot be determined whether word diversity assists learning of a base word embedded in an unrelated word (e.g., *miss* in *missile*).

Our study extends the research of Quémart and Casalis (2012) and Pacton et al. (2013) by asking how diversity supports children's extraction of the base word (e.g., *lurb*) from reading complex forms that are meaningfully related (e.g., *relurb*) or not (e.g., *belurb*). To test diversity, a total of 80 Grade 3 and 5 children will each read 12 stories containing non-words: Six will be diverse, containing two novel words from the same base (e.g., *relurb*, *mislurb*), and six will be

non-diverse, with only one novel word. Half the children will read stories with novel words that are meaningfully related to the base (e.g., *relurb*, *mislurb*). The other half will read stories containing novel words not meaningfully related to the base (e.g., *belurb*, *tralurb*). Children will later be asked to identify the complex non-words they read, the base words, and unfamiliar complex words (e.g., *unlurb*, *polurb*).

An ANOVA will test Diversity (diverse, non-diverse) and Test (targets, bases, unfamiliar words) as within-subjects factors, and Relatedness (words meaningfully related, words not meaningfully related) as a between-subjects factor. We expect superior performance by children who read the base embedded in two complex words, suggesting exposure to words in diverse contexts is more helpful than repeated identical exposures. Importantly, we predict this effect of Diversity will occur only for complex words that were meaningfully related to the base. Our findings on the role of diversity will contribute to reading theory (e.g., the self-teaching hypothesis; Share, 2008) and increase our understanding of children's natural learning strategies in order to support vocabulary growth through reading.

## References

- Jones, M. N., Johns, B. T., & Recchia, G. (2012). The role of semantic diversity in lexical organization. *Canadian Journal of Experimental Psychology*, *66*(2), 115-124.  
doi:10.1037/a0026727
- Pacton, S., Foulon, J.N., Casalis, S., & Treiman, R. (2013). Children benefit from morphological relatedness when they learn to spell new words. *Frontiers in Psychology*, *4* (696), 1-7.  
doi:10.3389/psyg.2013.00696
- Perea, M., Soares, A. P., & Comesaña, M. (2013). Contextual diversity is a main determinant of word identification times in young readers. *Journal of Experimental Child Psychology*, *116*(1), 37-44. doi:10.1016/j.jecp.2012.10.014
- Quémart, P., & Casalis, S. (2012, July). *Development of morphological representations in developing readers: A self-teaching study*. Poster presented at the Nineteenth Annual Meeting of the Society for the Scientific Study of Reading, Montreal, Canada.
- Share, D. L. (2008). Orthographic learning, phonological recoding, and self-teaching. In R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 36, pp. 31-82). San Diego, CA US: Elsevier Academic Press. doi:10.1016/S0065-2407(08)00002-5