Spelling as statistical learning: evidence from artificial lexicon experiments with typically developing children

Learning to spell is a vital yet understudied part of literacy development. It is also a challenging task: In inconsistent orthographies such as English and French, only few words can be spelled accurately by mapping phonemes (sounds) to their highest frequency graphemes (letters); most vowel sounds have, in fact, multiple spellings. In English, for example, /ɛ/ is most commonly spelled with the letter e (as in bed), but it can also be spelled with the letters ai (said), ea (head), ie (friend), and eo (leopard). How do children learn such inconsistent sound-letter correspondences? In this talk, I will present data from typically developing children that suggest that learners use the same domain-general statistical learning device believed to operate in spoken language (Saffran, Aslin, & Newport, 1996) to extract some untaught probabilistic spelling ‘rules’. Five learning experiments with artificial lexicons probe precisely what patterns young spellers can learn, and under what circumstances, to shed light on underlying learning mechanisms. Implications for theories of literacy development and broad educational implications are discussed.