

Multisyllabic Word Development in School-aged Children with and without Protracted Phonological Development

Few studies exist concerning multisyllabic word development (e.g. James, 2006 for Australian English) even though evaluation of multisyllabic words (MSWs) is considered an essential part of phonological assessment of school-aged children (e.g. Holm, Farrier, & Dodd, 2008). The aim of the current paper is to provide new MSW data from an urban-rural group of Canadian elementary school-aged children (both typically developing, TD and with protracted phonological development, PPD). MSW production was examined in a sample of children in kindergarten and at the end of the primary grades, in three sub-studies: (a) longitudinal: children with typical speech (the same 11 boys and 11 girls at the two different ages), i.e. 5 years versus 8-10 years; and (b) cross-sectional: 8- to 10-year-olds with PPD (N = 12; 7 boys and 5 girls) and those without, i.e. age-matched (N = 12; 7 boys and 5 girls), and (c) a developmental comparison of the group with PPD, and the full sample of 62 5-year-olds. The children were tested individually on phonology in single word elicitations, rapid syllable repetition, and a variety of language and literacy tasks. Twenty one- and two-footed words from the CAPES list were evaluated. These words were chosen to include various syllable lengths, stress patterns, syllable structures and feature sequences, and were within the same spoken word frequency range (an estimate of word familiarity). Quantitative analyses of the words were based on a metric using mismatch tallies according to all levels of the nonlinear phonological hierarchy (Mason et al. 2015). Descriptive linguistic analyses examined the words in six groups based on stress patterns: (a) *wS*, (b) *wSw*, *sSw*, (c) *Sww*, (d) *SwsW*, *swSw*, (e) *wSwW*, *SswW*, *swSwW*, and (f) words with taps. Statistical comparisons (MANOVAs, ANOVAs, Discriminant and Classification analyses)

showed a significant decrease in lexical, word structure and feature mismatches between ages 5 and 8 years of age. Structure and feature mismatch frequencies were significantly higher for age-matched 8- to 10-year-olds with PPD than without, and were equivalent to those of 5-year-olds. The metric reliably classified children in their original groupings. The 5-year-olds demonstrated more weak syllable deletion and developmental feature mismatches whereas the 8-year-olds with PPD used more compensatory strategies for weak syllable lax vowels and showed feature sequence mismatches. However, it was also clear that each word had its own idiosyncrasies because the hallmark of MSWs in English is their diversity in length, stress, CV sequences and segments. For example, *giraffe* was vulnerable to schwa deletion but not *guitar*. Future extensions of the metric could consider variability of MSW production. The metric has clinical application for assessment of on-going PPD, particularly for school-aged children.

References

- Holm, A., Farrier, F., & Dodd, B. (2008[2]). Phonological awareness, reading accuracy and spelling ability of children with inconsistent phonological disorder. *International Journal of Language and Communication Disorders*, 43, 300-302.
- James, D. G. H. (2006). *Hippopotamus is so hard to say: Children's acquisition of polysyllabic words*. Unpublished PhD dissertation. University of Sydney, Australia.