The Acquisition of /r/ By Setswana-Learning Children

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Abstract: Crosslinguistic studies (theoretical and clinical) have shown delays and significant misarticulation in the acquisition of the rhotics. This article provides a detailed analysis of the early development of the rhotic phoneme, an apical trill /r/, by monolingual Setswana (Tswana S30) children of age ranges between 1 and 4 years. The data display the following trends: (1) late acquisition of /r/; (2) a wide range of substitution patterns involving this phoneme (i.e., gliding, coronal stopping, affrication, deletion, lateralization, as well as, substitution to a dental and uvular fricative). The primary focus of the article is on the potential origins of these variations of /r/, even within the same language. Our data comprises naturalistic longitudinal audio recordings of 6 children (2 males and 4 females) whose speech was recorded in their homes over a period of 4 months with no or only minimal disruptions in their daily environments. Phon software (Rose et al. 2013; Rose & MacWhinney 2014) was used to carry out the orthographic and phonetic transcriptions of the children's data. Phon also enabled the generation of the children's phonological inventories for comparison with adult target IPA forms. We explain the children's patterns through current models of phonological emergence (MacWhinney 2015) as well as McAllister Byun, Inkelas & Rose (2016); Rose et al., (2022), which highlight the perceptual and articulatory factors influencing the development of sounds and sound classes. We highlight how the substitution patterns observed in the data can be captured through a consideration of the auditory properties of the target speech sounds, combined with an understanding of the types of articulatory gestures involved in the production of these sounds. These considerations, in turn, highlight some of the most central aspects of the challenges faced by the child toward learning these auditory-articulatory mappings. We provide a cross-linguistic survey of the acquisition of rhotic consonants in a sample of related and unrelated languages in which we show that the variability and volatility in the substitution patterns of /r/ is also brought about by the properties of the children's ambient languages. Beyond theoretical issues, this article sets an initial foundation for developing speech-language pathology materials and services for Setswana learning children, an emerging area of public service in Botswana.

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