

The Role of Frequency in the Acquisition of Complex Speech Sounds: Evidence from Palestinian Arabic

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Research shows that different speech sounds are acquired at various stages in the process of acquisition. While stops, nasals, and glides are generally acquired early, fricatives, affricates, and liquids usually lag behind (Dodd *et al.* 2003). However, Ingram (1989) argues that frequency may be a helping factor in the acquisition of complex speech sounds. Evidence from a study on Palestinian children's realization of the dental fricatives (ð^ɣ) and (ð) and the emphatic stop (d^ɣ) supports this argument. Acquisition of emphatics and dental fricatives in Arabic is reported to occur late in the acquisition process, at around 6-7 years of age due to the articulatory control required for narrow channels in fricatives and the added complexity of secondary articulation required to produce the emphatics (Amayreh & Dyson 1998; Amayreh 2003). However, results from this study show successful acquisition of these sounds occurring as early as 3;2 years old.

Data presented in this paper was collected from 9 typically-developing, monolingual Arabic children between the ages of 3;2 and 5;7 through play sessions and a picture-naming task as part of a larger research project on the acquisition and development of sociolinguistic variation by Palestinian children and adolescents in Syria. A total of 59 tokens were elicited for (ð^ɣ), 133 for (d^ɣ) and 114 for (ð). These were analysed auditorily and acceptable dialectal variants including [d^ɣ] and [z^ɣ] for (ð^ɣ), and [d], and [z] for (ð), were all considered in the coding process.

Non-target production occurred at only 3% in the case of (ð^ɣ), 1.5% with respect to (d^ɣ), and 2.6% in the case of (ð). These figures are much lower than is typically reported for other Arabic dialects (e.g. Amayreh & Dyson 1998; Amayreh 2003). Standard Arabic dental fricatives are also realised as such in the local dialect of the speech community under study, while they typically have stop or alveolar fricative realisations in other dialects. Additionally, [ð^ɣ] occurs as a realization of both (ð^ɣ) and (d^ɣ) as well as a realization of (ð) in the environment of back vowels, which is unique to this dialect. For example, /baid^ɣ/ 'eggs' and /nəð^ɣð^ɣɑ:rə/ 'glasses' are both realized with [ð^ɣ], and /hæðə/ is realized as [hɑ:ð^ɣə] in the local dialect. This makes these sounds frequent enough in children's input to provide enough exemplars for the children to store and practice in their own production, leading to a strong perception-production link and earlier acquisition than is typically witness for these sounds. Articulatory and developmental factors still played a role in the production and realization of these variables, with stop variants appearing to be acquired more readily than their fricative counterparts.

References

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