

# Input and language factors in the acquisition of geminate consonants by Arabic monolingual and bilingual children

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## Keywords

phonological acquisition; bilingualism; input factors

## Abstract

This paper reports on early signs of acquisition of geminate consonants by Lebanese Arabic children who are also exposed to French and/or English over the course of the one-word period. Arabic has phonologically contrastive lengths for both vowels and consonants. All 24 Arabic consonants can occur as geminates. Moreover, gemination in Arabic is not only important for lexical contrast (<sup>l</sup>bine/ 'he built' versus <sup>l</sup>bin:e/ 'brown'), but also plays a role in the morpho-syntactic structure of the language (e.g. /waʔaʕ/ 'he fell' versus /waʔ:aʕ/ 'he made someone fall'). Recent studies of children exposed to languages that make a quantitative length contrast in medial consonants have found a correlation between the input that the children receive (the frequency of occurrence of geminates in a language) and the rate at which the children acquire their production (e.g. Kunnari, Nakai, & Vihman, 2001; Vihman & Velleman, 2000). Little is known, however, about the acquisition of gemination when it is a feature of only one of the languages being acquired (gemination is not used distinctively in either French or English). The purpose of the study is therefore to:

- i. examine when Arabic children begin to distinguish quantitative contrasts in medial consonants
- ii. compare the results from the study with those of monolingual and bilingual children acquiring other languages that make a quantitative contrast in medial consonants.
- iii. interpret the results in terms of how differences in rate and path of learning are affected by the peculiarities of the adult language being learned and the exposure to more than one language.

Five Lebanese children aged between 13 and 18 months were recorded in unstructured play sessions with their mothers at the beginning and end of the one-word period. The procedures for analysis included the following:

The children's productions of geminates were compared in relation to those two developmental points.

The productions of the children's parents were also analysed in order to examine the frequency of occurrence of gemination in the Arabic input that the children receive and the frequency of use of the other languages.

The productions of target words by both children and adults were acoustically analysed. Measurements were made of the duration of the first vowel, stop consonant, and final vowel of the disyllables.

The difference in the relative duration between singleton and geminate stops, along with the relationship between consonant and vowel duration, were monitored and

compared across age (between the different children and between children and adults).

Results from this study are compared with existing studies on the acquisition of geminates and conclusions are drawn concerning developmental and cross-linguistic effects on the acquisition of the quantitative length contrast in the early stages of language production.

### **References**

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