

HOW LONG IS A VOWEL? A FIRST LOOK AT QUANTITATIVE VOWELS IN THE VOWEL SYSTEM OF FOUR YEAR OLD SAMOAN SPEAKING CHILDREN

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In research on phonological acquisition much of the discussion of segmental inventories is centred on the development of consonants. This is not surprising as children's consonantal production becomes accurate only over time and error patterns decrease with age (Zhu Hua and Dodd 2006). By contrast the research into the development of vowels is scanty. What little research has been done seems to support the view that children master vowels earlier than consonants and do not produce errors in their production. In Spanish, a language with a small vowel inventory (5), 2 year olds produce vowels with an accuracy of around 93% reaching 98% for 3 and 4 year olds (Goldstein 2007). Even in a language with a larger inventory of vowels such as English (26) children are over 90 % accurate with their vowel production by the time they enter their fourth year (Dodd, Holm et al. 2003). Our presentation reports on the acquisition of vowels in Samoan by four year old children growing up in New Zealand. Samoan is a Polynesian language with ten vowels: five short and five corresponding long /i u e o a i: u: e: o: a:/ (Mosel and Hovdhaugen 1992). In contrast with previous research, our results, using the methodology in Dodd et. al (2003), indicate that children in their fifth year produce errors in their production of vowels and their vowel development is not complete. While the children in our study have mastered the qualitative features of the vowels in their inventory and produce vowels with almost 100% accuracy they have not mastered the quantitative features of vowels. The long vowels of the children, although longer than their short vowels, are not sufficiently long when compared acoustically to those produced by adult speakers of Samoan (Condux 1990, Hovdhaugen 1992). No more than three children from a pilot group of 20 produced the appropriate length in the lexical items with long vowels e.g. /mu:mu:/ 'red', /fetu:/ 'star'. Further, none of these three children produced appropriate length consistently, and the quantity of the long vowels differed from the adult target more than 50% of the time. Our research thus indicates that vowel development can take longer than has been previously assumed and quantitative distinctions in particular are not fully mastered before age five.

To conclude we discuss various factors that may affect children's acquisition of the long vowels in Samoan. These factors include the bilingual context in which these children are growing up, the frequency of minimal pairs in the ambient language and the prosodic features of Samoan itself.

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