

## ACOUSTIC DESCRIPTION OF WESTERN CATALAN VOWELS BY ADOLESCENT SPEAKERS WITH WESTERN CATALAN, ROMANIAN AND ARABIC AS L1

This project investigates the acoustic variability of stressed Catalan vowels produced in monosyllabic nonsense words in carrier sentences by Western Catalan speakers who have Western Catalan (C), Romanian (R) and Magrebin Arabic (A) as L1. The vocalic systems of these languages are quite different, i.e. C has [i e ε a ɔ o u], R [i e a ɤ u o u] and A [i i: a a: u u:]. The data come from 39 adolescent speakers: 12 C, 15 R and 12 A, who uttered [i e ε a ɔ o u] together with [s ʃ ʎ k] in CVC context, with C1=C2. A total of 1090 vowel tokens were retained.

Linguistic variables under examination were vowel duration, values of F0, F1, F2 and F3, and immediate phonetic context; social variables were L1, sex, years spent in Western Catalonia, age of arrival to Western Catalonia, language uses at home, at school and with peers. Mono tracks sampled at 48,000 Hz were used, and formant measurements were taken in Praat.

Preliminary results show that [i e ε a ɔ o u] have different length depending on the L1 of the subjects: C speakers show shorter vowels than R or A ones and in R or A speakers there is a significant vowel shortening as the time spent in Western Catalonia increases. Formant values of F1 are significantly different between the informants, being lower in C than in R or A in [i e o u] and higher in C than R or A in [ε ɔ].