Effects of Spanish use on the production of Catalan vowels by early Spanish-Catalan bilinguals

Joan C. Mora, James L. Keidel & James E. Flege
Universitat de Barcelona / University of Sussex / University of Alabama at Birmingham

This study examined the production of Catalan vowels by 82 adults who had begun using both Spanish (S) and Catalan (C) at school age but differed in their self-reported percentage of Catalan use (11% = MostlyS, 40% = S/C, 63% = C/S, 86% = MostlyC). Bark-normalized Euclidean distances between the vowels /i/-/ε/, /u/-/ɔ/, /e/-/ɛ/ and /o/-/ɔ/ were computed to estimate the magnitude of between-vowel production differences. The results revealed an effect of Catalan use: the more frequently Catalan was used, the more open and less fronted — and thus the less Spanish-like — were productions of Catalan /ε/ and /ɔ/. Euclidean distances between /ε/-/ɛ/ were greater for the MostlyC group than for the MostlyS and S/C groups, also indicating an effect of Catalan use. These findings suggest that Catalan /ε/ and /ɔ/ are produced less successfully by early learners of Catalan who continue using Spanish often despite the fact that the second language (either Catalan or Spanish) was acquired in early childhood.

1. Introduction

A considerable amount of research on early bilingualism has investigated the plasticity of the perceptual system in second language (L2) learning. Some of this research has focused on perception of the Catalan mid-vowel contrasts /ɛ/-/ɛ/ and /ɔ/-/ɔ/ by various groups of bilinguals who spoke both Spanish and Catalan and who differed according to the way in which they became bilingual (simultaneous vs. sequential bilingualism) and which of the two languages was