Phonological acquisition of European Portuguese oral vowels: a perceptual study with Hungarian native speakers

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Although phonological acquisition is an area of increasing focus in SLA, the available research in European Portuguese as Foreign Language (EPFL) is still scarce and rarely reflected in teaching materials. In this study, we aim to investigate the perception of the vocalic system of EPFL by Hungarian learners, to better understand the difficulties in L2 phonological acquisition.

Hungarian is a non-Indo-European language with a phonemic and phonetic vowel inventory of /ɒ aː ɛ eː i iː o oː ø øː u uː y yː/, with no stress-induced vowel quality change (Markó, 2017; Gósy, 997). EP has seven phonemic vowels, /a/, /ɛ e/, /i/, /o ɔ/ and /u/, that are respectively realized as [ɐ], [ɨ], [i], [u] and [u] in unstressed position (Mateus & Andrade, 2000). This vocalic system poses a challenge to Hungarian speakers learning EP, since there are vowel categories – [ɐ] and [ɨ] – in EP that are absent in Hungarian. According to PAM (Best, 1995), we expect that the ability of Hungarian native speakers to discriminate contrastive EP sounds will depend on the similarity of EP vowels with Hungarian sounds. We hypothesize that Hungarian learners of EPFL will categorize the unstressed vowel [ɐ] into [ɛ], [eː] or [ø], and [ɨ] into [y] or [ø], as these are the closest L1 categories to the L2 categories at hand (Bolla, 1995; Martins, 1988).

To test our hypothesis, we will carry out a perceptual forced-choice identification task with goodness ratings based on Faris et al. (2018), in which we will observe how Hungarian native speakers categorise EPFL vowels into their L1 categories. The stimuli were recorded by three native-speakers of Portuguese and consisted of EP oral vowels inserted in a [ɡV] context. These stimuli include all phonetic EP oral vowels – [a ɐ ɛ e ɨ i o ɔ u] – to observe the categorization of [ɐ] and [ɨ] and have a more comprehensive picture of EP vowel categorization by Hungarian speakers. The participants – Hungarian learners of EPFL with little or no contact with the target language – must pair [ɡV] auditory stimuli with real Hungarian words orthographically presented in a grid, and then evaluate the similarity of the L2 vowel with the L1 Hungarian vowel of the chosen word on a scale from 1 to 5.

With this experiment we hope to have a better insight of the process of phonological categorization of non-native sounds, and consequently contribute to a better understanding of phonological acquisition in EPFL.

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Best, C. T. 1995. A direct-realist view of cross-language perception. In W. Strange (Ed.), *Speech perception and linguistic experience: Issues in cross-language research.* Baltimore: York Press, 171–204.

Bolla, K. 1995. *Magyar fonetikai atlasz. A szegmentális hangszerkezet elemei*. Budapest: Nemzeti Tankönyvkiadó.

Gósy, M. 1997. Semleges magánhangzók a magyar beszédben. *Magyar Nyelvőr* 121, 9–19.

Faris, M. M., Best, C. T., & Tyler, M. D. 2018. Discrimination of uncategorised non-native vowel contrasts is modulated by perceived overlap with native phonological categories. *Journal of Phonetics* 70, 1–19.

Markó, A. 2017. Hangtan. In Imrényi A., Kugler N., Ladányi M., Markó A., Tátrai Sz. & Tolcsvai Nagy G. (Ed.) *Nyelvtan.* Budapest: Osiris Kiadó, 75–206.

Martins, M. R. D. 1988. *Ouvir falar. Introdução à Fonética do Português*. Lisboa: Caminho

Mateus, M. H. M., & Andrade, E. d'. 2000. *The Phonology of Portuguese*. Oxford: Oxford University Press.