Phonological categorization of L2 Portuguese by Hungarian native speakers

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Empirical observations in the classroom suggest that Hungarian learners of L2 European Portuguese (EP) have difficulties acquiring variable stress and vowel reduction – in particular the two EP reduced vowels [ɐ] and [ɨ] – since these are absent in the Hungarian phonological system [1]. These features are essential from an intelligibility perspective, since in EP stress is variable and lexically contrastive [2] and vowel reduction is found to be the main clue for stress perception in this language [3].

In this talk, we will present results of the first experiment of a larger project that seeks to develop pedagogical interventions that facilitate the acquisition of L2 Portuguese phonology. In this first step, we developed and empirically validated a forced-choice identification task to map the categorization of the EP oral vowels by Hungarian speakers in their native phonological system.

This presentation will report the results of this forced-choice identification task. Forty-six Hungarian native speakers (age range 18 to 45) took part in this experiment. One group (n=32) had no experience in learning EP; the other group (n = 14) consisted of learners of EP with approximately two semesters of language classes (n=14). A group with native Portuguese speakers with no previous contact with Hungarian (n=30) served as our baseline condition. Participants completed a forced-choice identification task that required them to identify different auditory tokens of the nine EP oral vowels, inserted in a [ɡV] context, among a set of real Hungarian words with a [ɡV]CV structure, presented orthographically in a grid.

We predicted that the ability of Hungarian native speakers to identify and discriminate contrastive EP sounds would depend on the phonetic proximity of EP vowels with Hungarian sounds [4, 5, 6]. Accordingly, we hypothesized that these speakers would 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 vowels. We also expected some differences to occur after exposure to the target-language, and that these differences would be reflected in the categorization results. Results have partly confirmed the expectations, as [ɐ] was categorized into /ɛ/, but not into /eː/, and [ɨ] was categorized into /y/ and /ø/. A comparison of data in the two experimental groups suggests a learning effect for [ɨ], but not for [ɐ].

The data collected in this experiment shows overlapping situations in contrasts with [ɐ] and [ɨ]. According to the results, Hungarian speakers identify both non-native [ɐ] and [ɨ] into the single native category /ɛ/, which possibly causes discrimination difficulties [4]. As for [ɨ], considering that this segment is identified as a separated Hungarian category – /y/ or /ø/ –, discrimination of contrasts with this vowel won't be problematic [4].

According to the above mentioned, an auditory perceptual training focused on tuning [ɐ] into a new category, separating it from /ɛ/, is expected to improve Hungarian speakers' ability to perceive better this EP vowel. To test this hypothesis, we are currently designing a sequence of oddity discrimination tasks focused on the overlapping situations mentioned above. This perceptual training will be followed by Hungarian learners of L2 Portuguese within a 5-week timeframe.

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