Teaching Catalan pronunciation to English native speakers: the use of prosody, embodiment and audiovisual materials as enhancers of learning

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INTRODUCTION

Nowadays perspectives highlighting the significance of pronunciation in oral language learning are arising, and several studies underline the role that prosody (Boula de Mareüil & Vieru-Dimulescu, 2006; Missaglia 2007), but also gestures and body language (Odisho 2007; Gluhareva, Prieto 2017; Crison, Romero & Romero, 2018) play in phonetics acquisition. The aim of this study is to test the efficacy of gestures, body language, prosody and audiovisual materials in contexts that have already been considered favorable for sounds production. All those parameters will be used according to the bases of the verbo-tonal method (VT).

AIM OF THE STUDY

This project seeks to highlight the relevance of gestures, prosody and ICT for enhancing the pronunciation of any language and, in this case, Catalan pronunciation.
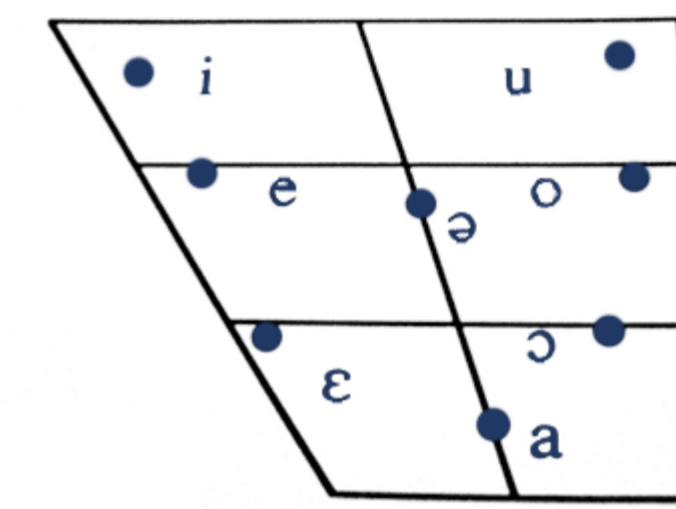
Map 1. Catalan

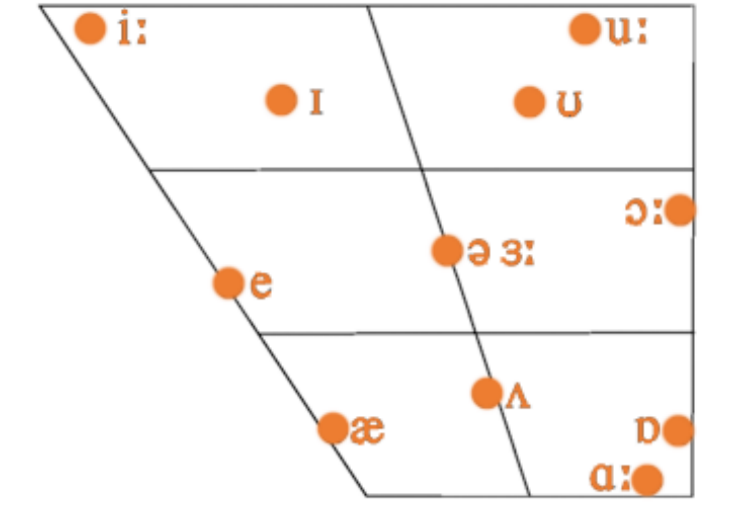Figure 1: Eastern Catalan Vowel Inventory

Figure 2: English Vowel Inventory

METHODOLOGY

Trainees:

3 American English native speakers resident in Amherst, Massachusetts (US), young undergraduate students at UMass, who were learning Catalan FL (and had no other contact with Catalan than their Catalan minor classes).

Student A: Good level of Catalan. (Lang. spoken: English, German, Spanish, Catalan)

Student R: Regular level of Catalan. (Lang. spoken: English, French, Catalan, Swedish, Italian);

Student K: Very low level of Catalan proficiency. (Lang. spoken: English, few Catalan).

Data: pretest and posttest

Pretest: February 2018 - (text to read: legend of *Pirene*) // Posttest: May 2018 (text to read: legend of *Pirene*).

Training proposal: Taking into account the problems detected at the first production tests/pretests, a gestural and prosodic proposal was created to enhance the production of the sounds, taking tension into consideration as a basis for the improvement of pronunciation. The training lasted eight 1-hour sessions during 2 months. Practicing at home was advised using the GPC site (Guidelines for Catalan Pronunciation).
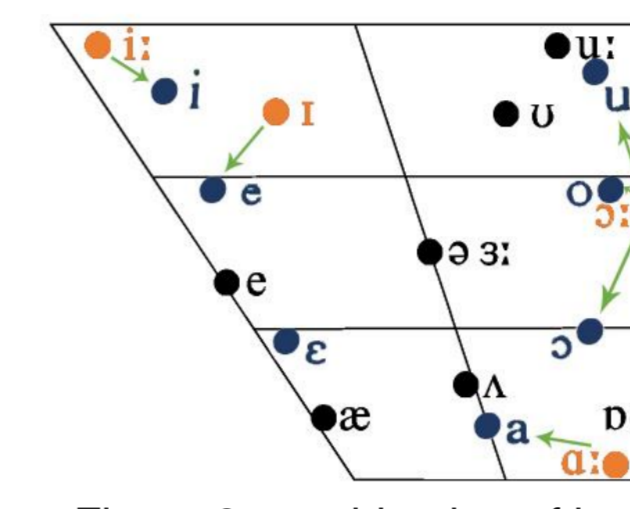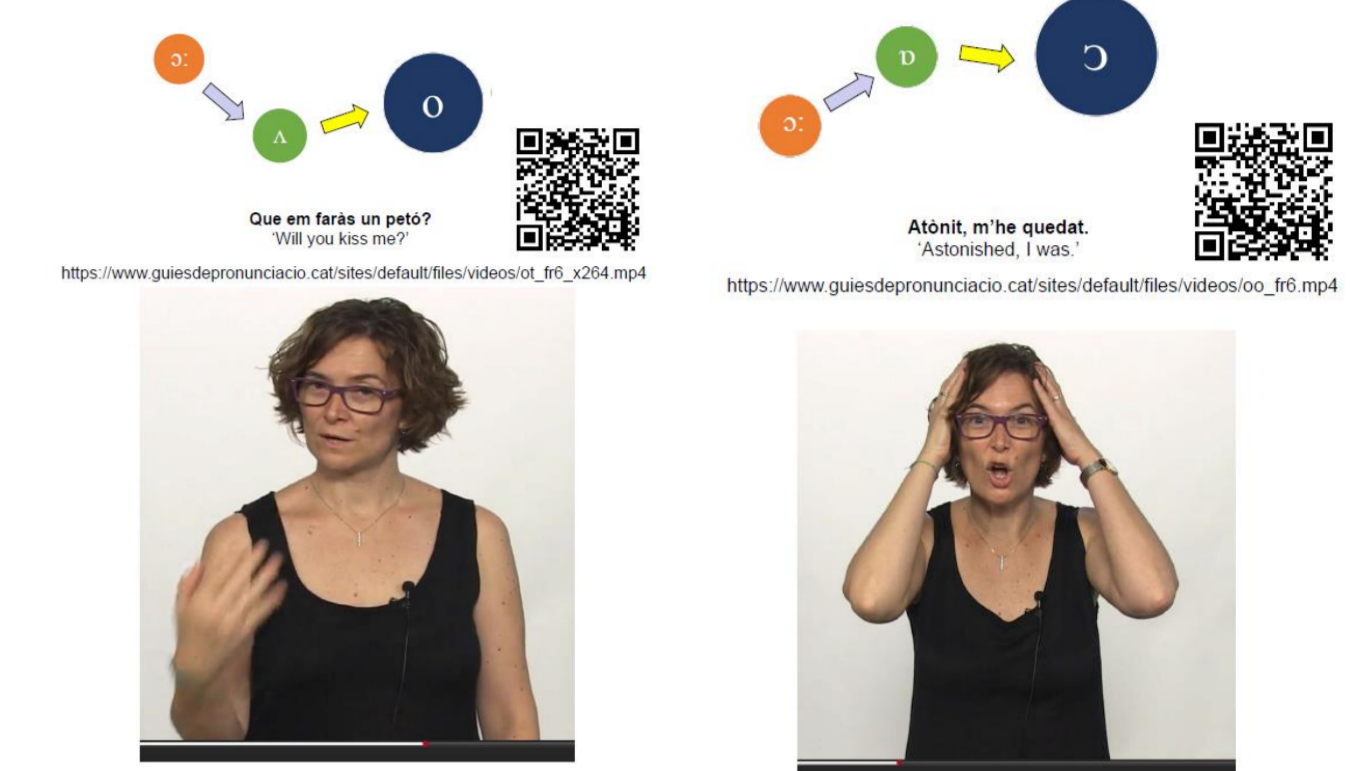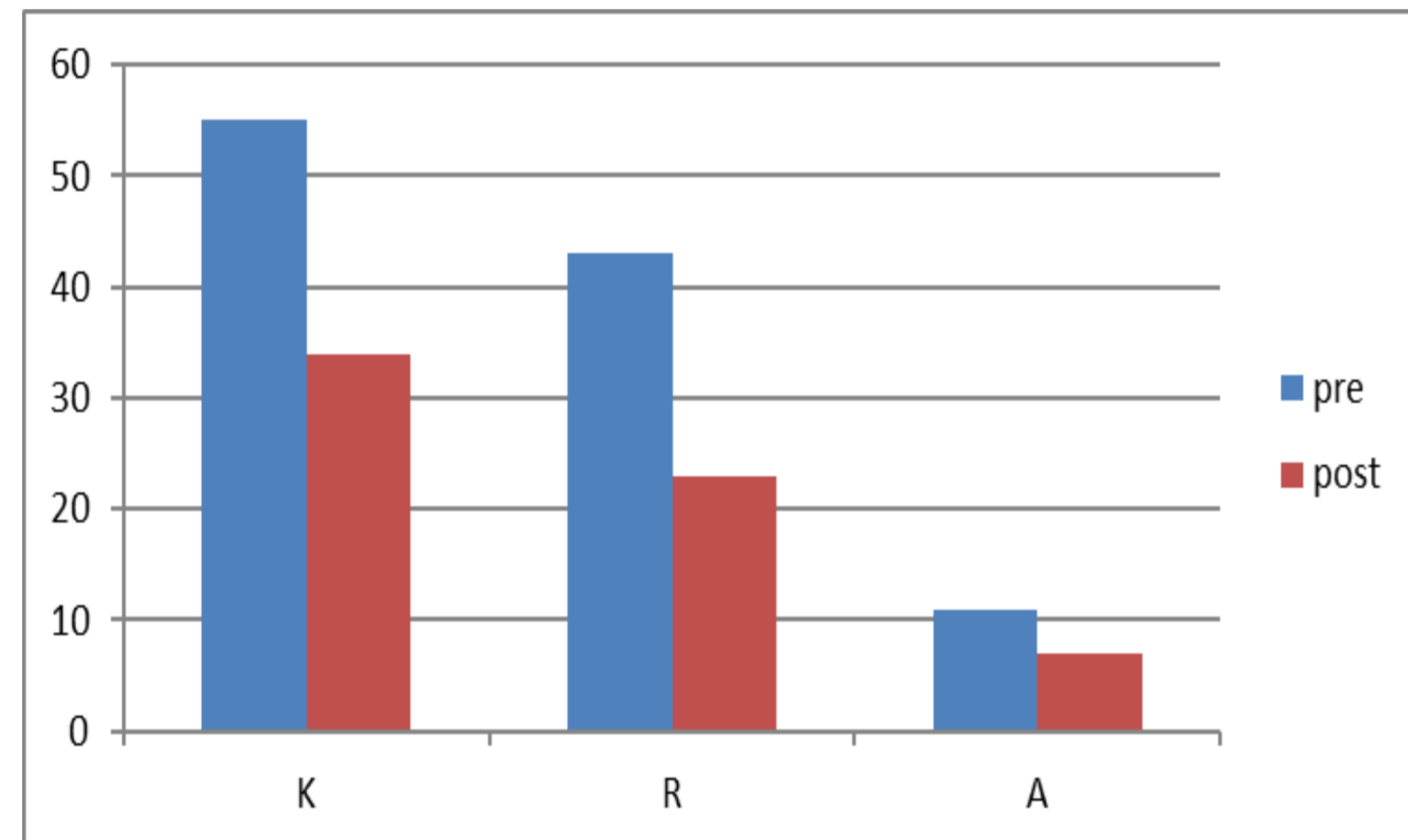
Figure 3: combination of both vowel inventories – basis for the proposal

DATA ANALYSIS

The realization of rhotic consonants (RC) depends on each informant, the knowledge of Catalan and of other Romance languages.

Regarding the informants, K has problems with 55 RC, R with 43 and A with 11, out of the overall number of 83 RC. In the posttest, the problems are: K (34), R (23) and A (7).

The alveolar trill is harder to acquire than the alveolar tap. It is even harder to acquire in initial position (as in *realme, realitzar, roques, refugiar*, etc.) than in a complex consonant coda (as in *afanyar-se* or *portar*). All informants improve their trill production after the VT sessions (see Graph 1).

Taps are easier to utter than trills, but when in complex consonant onsets, the difficulty is greater (*treball, prou, catàstrofe*). In words that have a graphical equivalent in English, like *Hèrcules* or *Mediterrània*, the difficulty is higher than in words that do not have such equivalents.

Graph 1. Amount of mispronunciations of Catalan **rhotic consonants** before and after the VT sessions
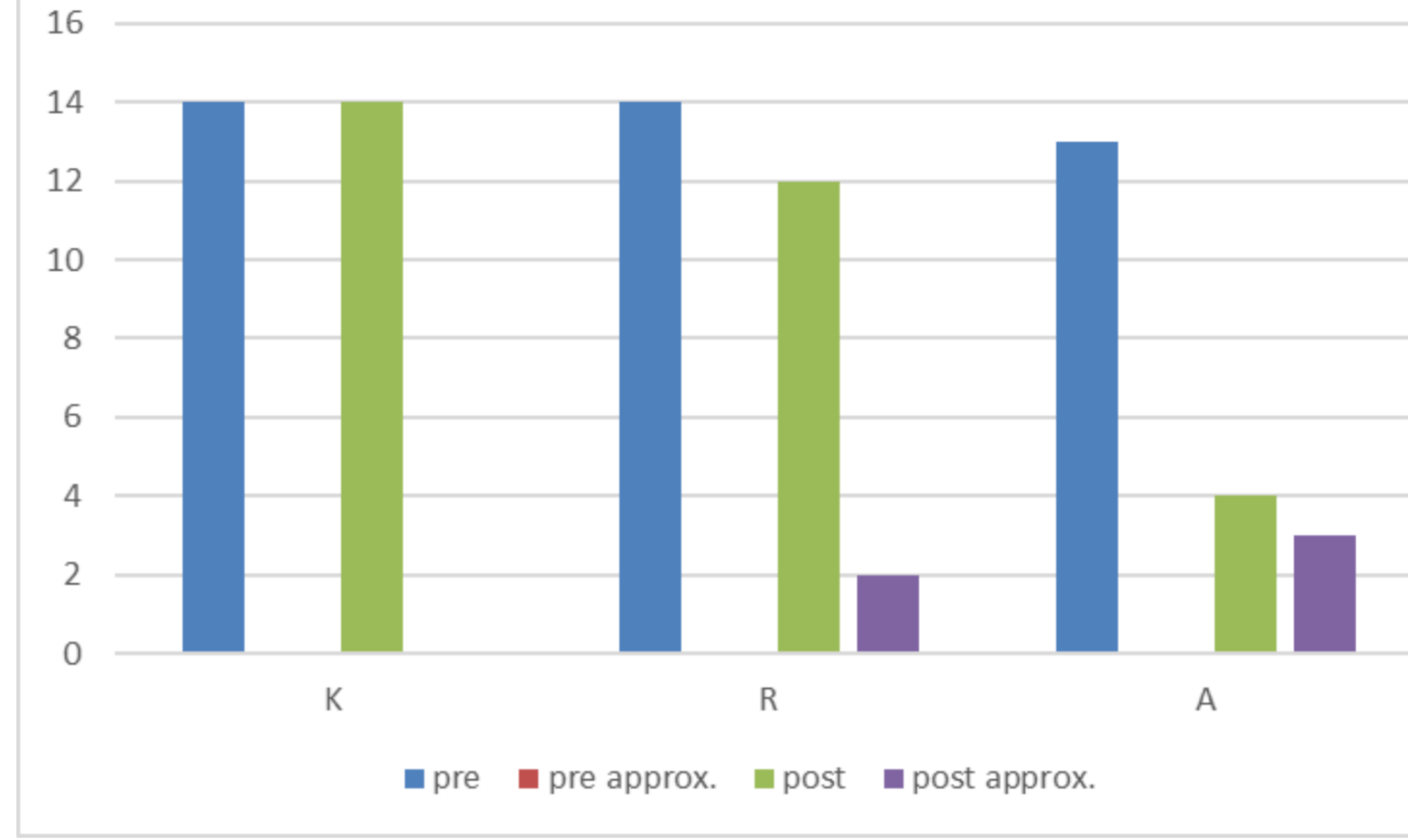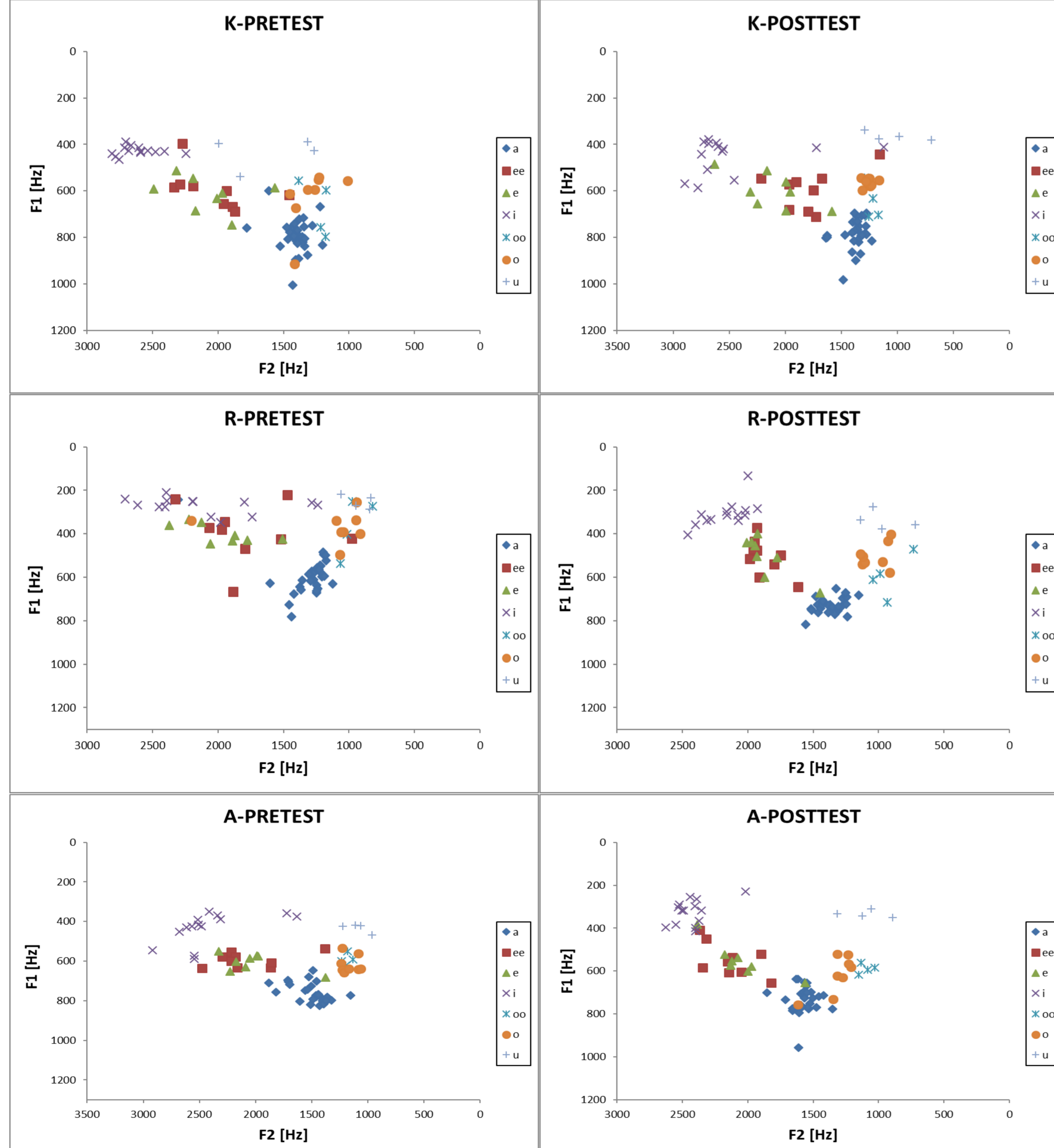
The realization of alveo-palatal lateral approximants (ALA) is similar for all the informants: K and R have problems with 14 ALA and A with 13, out of the overall 14 ALA. In the posttest, the problems are: K (14), R (13+1 approx.) and A (4+3 approx.).

Regarding the informants, K utters mainly /l/, R utters /l/ (mainly in coda position: *amagatall, perill*, etc.), /ʎ/ (mainly in onset position: *filla, llegenda*, etc.) and /ʒ/ (*lloc*), and A utters /j/. Two informants improve their trill production after the VT sessions (see Graph 2).

While A clearly improves after the VT session, with few errors and nearly-well pronounced ALA, there is much less improvement for R. However, most of the /l/ utterances and the /ʒ/ turn to /j/. With regard to K, there's no achievement of the target sound at all, but about half of the /l/ sounds turn to /j/.

Graph 2. Amount of mispronunciations and approximately correct utterances of Catalan **alveolo-palatal lateral approximants** before and after the VT sessions

K-PRETEST

K-POSTTEST

Graphs 3 & 4. Formants 1 and 2 of all the **stressed vowels** in the pretest (graph 3, left) and in the posttest (graph 4, right) of the student K.

- Pretest & posttest: vowels between 400 Hz approx. and a little bit over 1,000 Hz.

- /e/ and /ɛ/ take up a similar area, but in the posttest the area of /ɛ/ is closer to the center (lower F2) than that of /e/.

- /o/ and /ɔ/ take up a similar area in the pretest, but the differences of the F1 lead to two clearly different spaces in the posttest.

R-PRETEST

R-POSTTEST

Graphs 5 & 6. Formants 1 and 2 of all the **stressed vowels** in the pretest (graph 5, left) and in the posttest (graph 6, right) of the student R.

- Pretest: vowels between 200 Hz approx. and 800 Hz. Posttest: vowels between 200 Hz approx. and a little bit over 800 Hz.

- /i/, /e/ and /ɛ/ take up a similar area which is also very unspecific; in the posttest, the area of /i/ is well defined in relation to /e/ and /ɛ/, and these two take up a similar space.

- /u/, /o/ and /ɔ/ take up a similar space in the pretest, but the differences of the F1 lead to three clearly different spaces in the posttest.

A-PRETEST

A-POSTTEST

Graphs 7 & 8. Formants 1 and 2 of all the **stressed vowels** in the pretest (graph 7, left) and in the posttest (graph 8, right) of the student A.

- Pretest: vowels between 400 Hz approx. a little bit over 800 Hz. Posttest: vowels between 200 Hz and 1,000 Hz approx.

- /i/ and /u/ are uttered more closed and similar to those of Catalan in the posttest than in the pretest.

- /e/ and /ɛ/ take up a similar area, but this area is bigger in the posttest, and vowels are in more dispersion than in the pretest; /e/ take up a more compact space.

- /o/ and /ɔ/ take up a similar area in the pretest, but the differences of the F2, and not as much of the F1, lead to two clearly different spaces in the posttest.

- /a/ takes up a more compact space in the posttest than in the pretest.

DISCUSSION AND CONCLUSIONS

It can be observed that there has been enhancement in the pronunciation of all the trainees, which supports the idea that either gestures and body movement (Odisho 2007; Gluhareva, Prieto 2017; Crison, Romero & Romero, 2018), or prosody (Boula de Mareüil & Vieru-Dimulescu, 2006; Missaglia 2007) or ICT, everything used in their learning process, have been significant at improving their pronunciation (i.e. vowels have more specific acoustic areas, closer to the native Catalan ones; nearly half of the consonants that presented problems in the pretest are also closer to their Catalan pronunciation in the posttest).

Embarrassment has ended up being a significant parameter, too, but a negative one, since it has pushed back some learners when doing wide and tense movements, or when producing some specific intonation patterns. Thus, the results have been poorer in those cases. Another significant aspect has been the amount of languages spoken by the learner: the more languages spoken, the faster the learning process has been.

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