

Orthography and cognate status influence phonemic errors in EFL speech production

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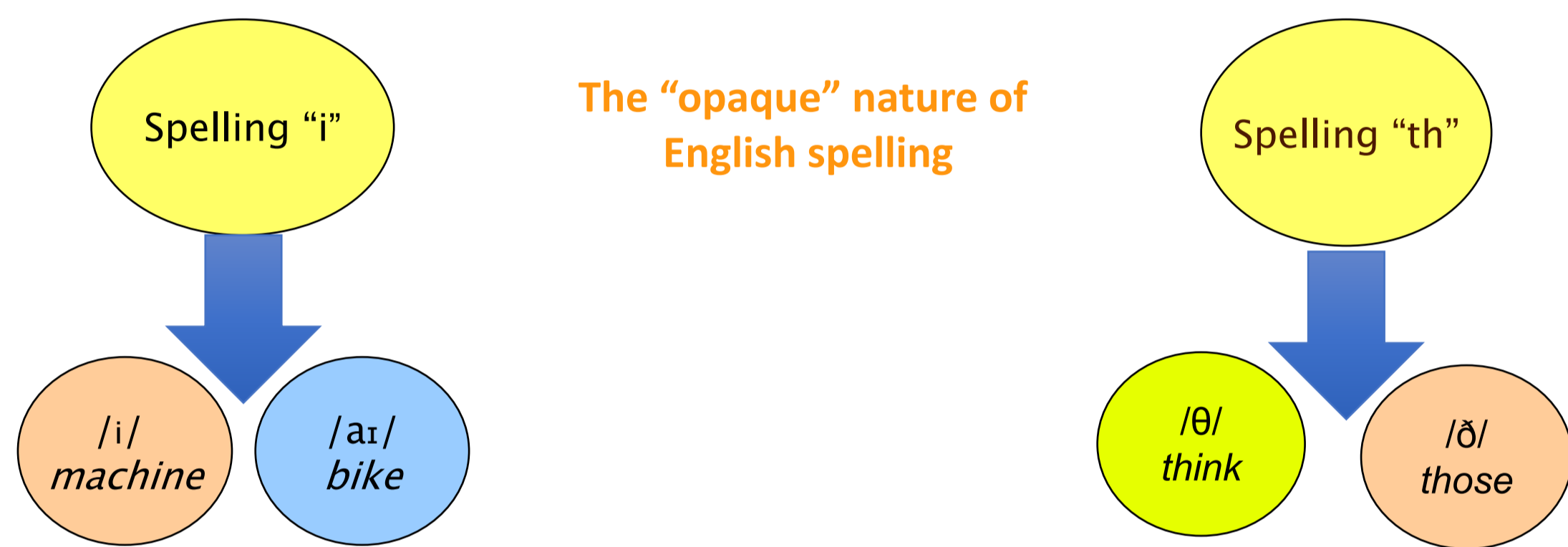
1. INTRODUCTION

L1/L2 learning and orthography

- L1 Literacy skills (mapping sounds onto letters) are learned around 6 years (Burnham, 2003; Burnham et al. 2002). Literacy development has positive effects for phonological awareness: establishment of L1 phonological categories.
- Orthography has a facilitating effect in pronunciation if the target language has a transparent orthography (Spanish), if the TL has an opaque orthography (Irish and English), the number of speech errors increased substantially (Erdener & Burnham 2005).
- At the first stages of exposure to the TL, orthographical input may not be beneficial to learners whose L1 has a transparent orthography (Erdener & Burnham 2005, Escudero 2015).

Cognate effects:

- Mora & Nadeu (2012): cognate effects of vowel production by Spanish-Catalan bilinguals.
- Amengual (2012): more accented production of /l/ in cognates than in non-cognates by Spanish heritage speakers.
- Rallo Fabra (2015): less reduced vowels in cognates than in non-cognates.

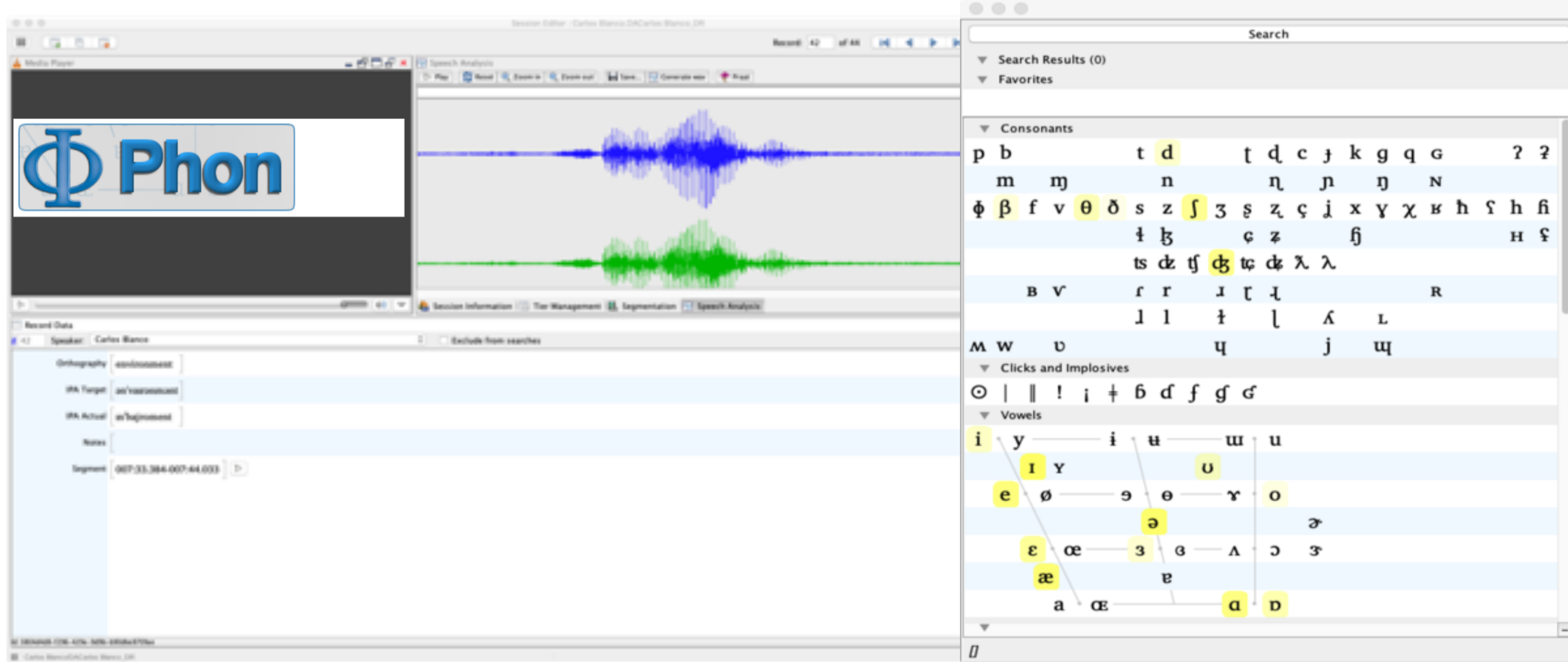


2. RESEARCH QUESTIONS

- Will learners' pronunciation be influenced by the elicitation condition (Reading aloud vs. Delayed repetition)?
- Will learners' pronunciation be influenced by the cognate status of the target words?

3. METHOD

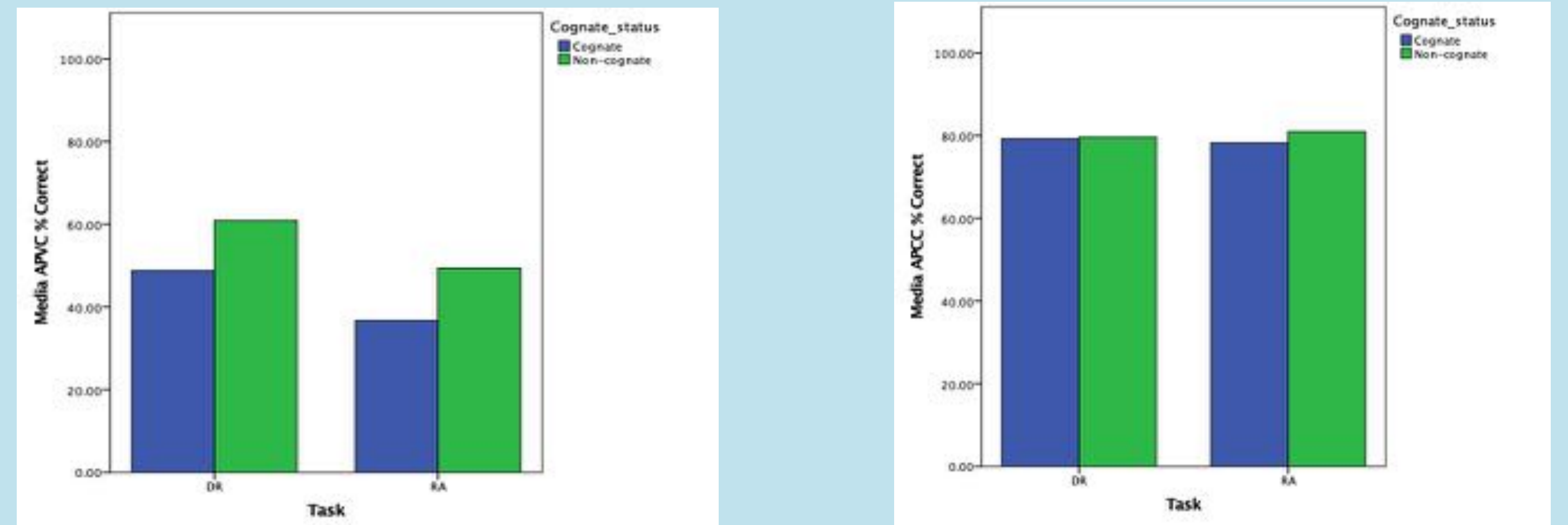
- Participants:** 18 EFL students aged 14-15 at a state secondary school in Majorca participating in an online class project "Empazise through literature". CEFR Level: A2-B1.
- TL exposure:** 4 hours per week of EFL lessons.
- Language tests:**
 - Language background questionnaire
 - Customized language level test
 - Vocabulary-size test (Nation 2001)
 - Participant self-assessment of TL pronunciation
- Elicitation tasks:** reading aloud from visual prompts and delayed repetition in two different sessions separated by an interval of 1 month.
- Speech materials:** 40 words (20 cognates, 20 non-cognates) related to cultural awareness.
- Pronunciation accuracy:** Normalized measures of aligned percentage of consonants and vowels correct (APCC% and APVC) obtained from IPA transcriptions with PHON (Rose & MacWhinney, 2015).



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4. RESULTS



- Task condition affected %APVC: [z = - 5.950, p < 0.001].
- Better performance in the delayed repetition task than in the reading aloud.
- Task condition did not affect % APCC : [z = - 0.397 p = 0.692].

Cognate effects

- In the DR condition, % APCC of cognates did not differ significantly from non-cognates [z = -1.467 p = 0.142].
- In the DR condition, % APVC in cognates and non-cognates words differed significantly [z = -4.574 p < 0.001].
- In the RA condition, % APCC of cognates and non-cognates differed significantly [z = -2.482 p < 0.05].
- In the RA condition, % APVC in cognates and non-cognates also differed significantly [z = -4.574 p < 0.001].

Phonemic errors

Target word	Spanish/Catalan translation	IPA Target	IPA Actual
bilingual	Bilingüe / bilingüe	/baɪˈlɪŋɡwəl/	/biˈlɪŋɡwəl/
government	Gobierno / govern	/ˈɡʌvənmənt/	/ɡoˈvɛrnəmənt/
politician	Político / polític	/ˌpɒləˈtɪʃjən/	/poˈliθjən/
organisation	Organización / organització	/ˌɔːɡənəˈzeɪʃən/	/ˌoʊɡanɪtsˈætʃən/
disease	Enfermedad/malaltia	/ˈdiːziːz/	/deˈsesi/ /diˈzeis/
jewish	Judío / jueu	/ˈdʒuːˌɪ/	/ˈxewis/ /ˈjewis/
journalist	Periodista / periodista	/ˈdʒɜːnəlɪst/	/ˈdʒoʊnəlɪst/
survivor	Sobreviviente/ sobrevivent	/səˈvaɪvə/	/sʊrˈβiβor/

Summary of results

- Task condition: More target-like vowels in the DR task but no significant effect for consonants.
- Cognate status: Different trends for vowels and consonants.
 - More target-like vowels in non-cognates for both tasks.
 - More target-like consonants in non-cognates for the RA task.

5. DISCUSSION

- In the RA condition, orthography does NOT have a facilitative effect for cognates.
- Students' pronunciation of cognates is mostly non-target-like and influenced by the Spanish spelling rules.
- In the DR condition, pronunciation is more target-like, possibly facilitated by the absence of orthography.
- Pronunciation errors: If the word they hear is not in their lexicon, they produce:
 - A non-word:
 - A more frequent word: *brother* for *border*.
 - They do not repeat it.

6. IMPLICATIONS

- L2 pronunciation in non-cognates may be learned on a word-by-word basis. Exemplar Models: "A set of overlapping categories of similar words build up the memory of the speakers of a language" (Port, 2007). This memory includes:
 - Prototypes and abstractions.
 - Orthographic and phonetic descriptions
- Massive L2 auditory exposure should precede orthographic exposure in the early stages of L2 learning.

7. FURTHER RESEARCH

- Analyze effect of vocabulary size on overall pronunciation scores.
- Analyze effect of word frequency to account for within-word variability.
- Qualitative analysis: Detailed analyses of errors from the phonological perspective (epenthesis, deletion, etc).