Orthography-induced Transfer in L2 Phonological Acquisition of Spanish

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Research questions
1. Does exposure to orthographic input promote L1-based phonological transfer, leading to non-target-like productions in English-speaking learners of Spanish?
2. Do condition of learning and production and grapheme-to-phoneme (in)consistency modulate the rate of orthography-induced transfer?

Methods
Participants:
• 40 mono-lingual novice adult English-speaking learners of Spanish

Conditions:
(1) Orthography at learning and production, (2) Orthography at learning only, (3) Orthography at production only and (4) No orthography
• Images and auditory input were presented at learning

Condition 1: Learning
Condition 2: Production

Stimuli:
• 108 Spanish words
• Different grapheme-to-sound correspondences: Example: -<s>-[s]
• Same grapheme-to-sound correspondences: Example: <-m>-[m]

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Results
• Exposure to orthographic input triggers transfer leading to non-target-like productions
• The factor condition was highly significant: (χ²(df = 3) = 243.73, p = .000).

Results (cont’d)
• The factor grapheme-to-sound (in) consistency was highly significant
• Individual grapheme-to-sound correspondences that differ between English and Spanish resulted in different rates of transfer (χ²(df = 5) = 177.35, p = .000)

Discussion
• Exposure to orthographic input can hinder L2 phonological acquisition
• The condition of learning and production affects the rate of orthography-induced transfer leading to non-target-like productions

Proposal:
1. The rate of phonological transfer depends on the degree of salience of the phonetic/acoustic difference between the L1 and L2 sounds; the larger the phonetic/acoustic difference, the more salient the difference and the lower the rate of transfer
2. Considering that orthography-induced transfer is also present in advanced learners, exposure to orthography affects the establishment of underlying L2 categories

Conclusions
• Shows that exposure to orthography at learning and/or production can hinder L2 phonological acquisition
• Calls for the incorporation of the role of orthography in the future models of L2 phonological acquisition

Selected References

Acknowledgements
• Professors Laura Colantoni, Jeffrey Steele & Ana Teresa Perez-Leroux, the participants, Language Learning Dissertation grant (funding)

Figure 1
Effect of Condition on Transfer

Figure 2
Effect of Individual Grapheme-to-sound Correspondences on transfer

Table 1
Mann-Whitney Test Results : Effect of Condition on transfer
<table>
<thead>
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<th>Condition</th>
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<th>z</th>
<th>p</th>
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Table 2
Mann-Whitney Test Results : Pair-wise Comparisons of Grapheme-to-sound Correspondences
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