The role of stress perception in the assignment of written accent in Spanish

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Abstract

The aim of this investigation is to examine whether the adults' difficulty in placing the written accent in Spanish words is related to their ability in perceiving stress. The following variables were also taken into account in this study: the participant's education level (academic and non-academic), the stimulus lexical status (words and non-words), accentual pattern (proparoxytone, paroxytone and oxytone words) and length (2, 3 and 4 syllables). Participants performed a stress identification task and a word spelling task. Besides the effects of lexical status, education level and accentual pattern, results show an effect of the stress perception in the assignment of the written accent: stimuli with a correctly identified stress were more likely to be correctly written (i.e. with or without written accent) than the incorrectly perceived stimuli. This finding reinforces the idea that there is a relationship between prosodic and written skills.

Reference


Available at:
http://archive-ouverte.unige.ch/unige:44961

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Introduction

• Spanish lexical stress and written accent:

<table>
<thead>
<tr>
<th>Lexical stress position</th>
<th>Written accent</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paroxytone words (P)</td>
<td>Not required if ending with a vowel; -n or -s</td>
<td>*áveis/*áveis</td>
</tr>
<tr>
<td></td>
<td>Required if ending with a consonant other than -n or -s</td>
<td>*áveis/*áveis</td>
</tr>
<tr>
<td></td>
<td>Required if ending with a consonant other than -n or -s</td>
<td>*áveis/*áveis</td>
</tr>
<tr>
<td>Oxytone words (O)</td>
<td>Not required if ending with a vowel; -n or -s</td>
<td>*áveis/*áveis</td>
</tr>
<tr>
<td></td>
<td>Required if ending with a consonant other than -n or -s</td>
<td>*áveis/*áveis</td>
</tr>
</tbody>
</table>

• Difficulty for native speakers of Spanish in placing the written accent ➔ Relation with the difficulty in perceiving stress?

Objective

• Examine whether the adults’ difficulty in placing the written accent is related to their ability in perceiving stress

Method

• Participants: 32 native speakers of Spanish from Costa Rica:
  - 16 Academics (University students and academic staff)
  - 16 Non-academics

• Material: 48 Spanish words and 48 Spanish non-words:
  - Two-, three- and four-syllable stimuli (e.g. mesa, caseta, camarero; *auce, *mapovo, *oreproca)
  - PP, P and O pattern (e.g. únicos, rosas, moral; *cártina, *tóbar, *meper)
  - With and without written accent (e.g. líder, rosas; *tóbar, *meper)

• Procedure: Online testing with Labguistic platform (www.labguistic.com)
  - Perception part: Stress identification task
  - Spelling part: Spelling task

• Data analysis
  - Spelling part: Correct/incorrect responses as for the presence/absence of the written accent
  - Perception part: Correct/incorrect responses
  - Mixed-effects regression models:
    - Random terms: participants and stimuli
    - Dependent variable: spelling correct/incorrect response
    - Predictors: participant’s education level (Academics/Non-academics), stimulus lexical status (Words/Non-words), stimulus accentual pattern (PP, P, O), stimulus length, participant’s perception response (Correct/Incorrect)

Results

• No effect of Stimulus length ➔ New regression model without it
• Good global performance: 89% ➔ Relatively easy task

Role of Lexical status

• More correct responses for Words (95%) than for Non-words (83%)
• No interaction Lexical status x Education level

Role of Education level and Accentual pattern

• More correct responses for Academics (95%) than for Non-academics (83%)
• More correct responses for PP (81%) and O (92%) than for P (85%)
• Interaction Education level x Accentual pattern:
  - Academics have more difficulties with P stimuli.
  - Non-academics have more difficulties with P and PP stimuli.

Role of Stress perception

• More correct responses for stimuli with correctly identified stress than for stimuli with incorrectly identified stress

• Interaction Stress perception x Accentual pattern: smaller effect of stress perception in P than in PP or O
• Interaction Stress perception x Education level: larger effect of stress perception in Academics than in Non-academics

How can these differences be explained?

• In comparison with Non-academics:
  - Academics are better in perceiving stress.
  - Academics present less variability in their perception of stress.

Conclusion

• No effect of Stimulus length
• Effect of Lexical status (i.e. more correct spellings for Words than for Non-words) ➔ Written accent stored in the mental representation of the words?
• Effect of Education level ➔ Better mastering of the written accentuation rules in Academics
• Effect of Accentual pattern (i.e. less correct spellings for paroxytone stimuli than for proparoxytone and oxytone stimuli)
  - Analysis of the Corpus Digital de Mensajes Presidenciales de Costa Rica (11'370 types):
    - Few paroxytone words with a written accent: from the 16% of the words with a written accent, only 16% are paroxytone.
    - Paroxytone words ending in -n or -s: infrequent spelling
  - Effect of Stress perception (i.e. more correct spellings for stimuli with correctly identified stress than for stimuli with incorrectly identified stress)
    ➔ The difficulty in placing the written accent in Spanish is related to the ability in perceiving stress.
    ➔ There is a relationship between prosodic and written skills.