

## Determining Optimal Spanish Words for Inclusion in Assessments that Evaluate Children's Phonological Patterns

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### **Abstract**

A critical need exists for unbiased speech/language assessment instruments for all children, but especially for children who speak a language other than English (e.g., Spanish). According to the National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs, the number of English Language Learners (ELL) in U.S. schools has more than doubled from 2,030,451 in 1990 to 5,119,561 in 2005. Of the total ELL population, 80% are reported as being Spanish speakers. This has created a demand for Spanish speech/language services. Currently, published phonological assessment instruments in Spanish are sparse. A major issue pertains to the selection of optimal words for eliciting speech samples. Sixty stimuli were presented to 20 typically developing Spanish-speaking 3- and 4-year-old children of Mexican descent to determine which Spanish words are known best by young Spanish-speaking children. The results indicate that body parts and food/drink items were identified most readily by participants. Colors and numbers were named first in English more often than in Spanish. This analysis will provide additional data regarding differences found from a previous study involving children's abilities to recognize pictures of words and objects in Spanish. Results will be used for the selection of optimal words for future Spanish phonological assessment protocols.

### **Introduction**

Diagnostic instruments serve a major purpose in the evaluation of children with communication disorders. Currently, there is a critical need for improved and valid phonological assessment instruments that target Spanish-speaking children (Goldstein, 2002; Iglesias, 2001; Kaiser, 1998). In order to improve such assessment tools, researchers have found that stimuli should be pre-tested for their efficiency in eliciting responses (e.g., Madison, Kolbeck, & Walker, 1982). Data from studies investigating differences between imitative and spontaneous naming of stimuli, however, have been inconclusive. Although some investigators purport that only negligible differences exist between spontaneous and imitated responses (Goldstein, Fabiano, & Iglesias, 2004), others suggest that these differences are important and advocate obtaining spontaneous responses (e.g., Shea, & Blodgett, 1994). Words, therefore, should be chosen carefully. A Spanish-speaking child, for example, may not be familiar with a particular test word or stimulus (Langdon, 1992). This unfamiliarity may alter a child's overall test score. Developing a list of easily identifiable Spanish words is a way of pre-testing stimuli for assessment purposes. In a preliminary study by Prezas (2006), 10 typically developing 5-year-old bilingual children of Mexican descent in Corpus Christi, Texas, were presented with stimuli for 70 Spanish words via pictures or objects. The goal was to determine which Spanish words would be most recognizable to children. Results from the study revealed that body parts were identified most readily followed by numbers and colors, all of which were represented as objects. Nine of the 70 Spanish words received the maximum amount of points in the study, indicating the words were identified immediately and named spontaneously by all 10 participants. The main purpose of the current study was to determine possible similarities and differences with younger Spanish-speaking participants.

### **Participants**

Twenty typically developing 3- and 4-year-old bilingual children participated in this study. Participants were enrolled in a Head Start Program in Wichita, Kansas, were of Mexican descent, and were identified as English Language Learners (according to school records). Each child passed a hearing screening bilaterally at 500, 1000, 2000, and 4000 Hz at 25dB HL. None of the participants had been diagnosed with a communication disorder or had received speech and/or language intervention.

## Procedures

The 20 participants were assessed individually in a quiet room in the program facility. Each session lasted approximately 20 minutes and was audio-recorded on a PMD 670 digital recorder. All children were instructed in Spanish. Each child was asked to identify 60 Spanish words in the form of objects (words found to be recognized more readily in first study), which were adjusted to reflect results from a previous study (Prezas, 2006). Temperature words (e.g., *frio/caliente*), which could not be represented in object form, were represented by pictures. Responses were recorded by level of elicitation that was required to generate the desired response (Immediate-spontaneous, delayed-spontaneous, delayed-imitated, and directly-imitated). Based on responses from all 20 participants, an overall percentage for each word was calculated.

## Results

Body parts and food/drink items were known more consistently than other categories of words. Four words were identified spontaneously by all participants in the study (*caballo*, *chicle*, *cuchara*, and *huevos*) receiving perfect scores. Four words (*muñeca*, *escuela*, *estufa*, and *globo*), which often required immediate imitation, received the lowest scores. Because object selection is critical in word naming, however, better object representation may have improved word recognition in some cases. Results are summarized in Table 1. Whereas colors and numbers were named more readily in Spanish by 5-year-old children in a previous study (Prezas, 2006), the younger children of the current study named colors and numbers in English first. These results may be due to age differences, school program differences, or other factors. Interestingly, when comparing both studies, children predominantly identified words more readily as objects vs. pictures (e.g., *cuchara*, *espejo*, and *bicicleta*). With the knowledge that some words are more readily known by Spanish-speaking children, it will be important to include such words in future assessments.

Table 1: Naming Results for 60 Spanish Stimuli\*

| Word    | Score | Word       | Score | Word      | Score | Word    | Score | Word      | Score | Word       | Score |
|---------|-------|------------|-------|-----------|-------|---------|-------|-----------|-------|------------|-------|
| Caballo | 100   | Estrella   | 92.5  | Bicicleta | 86.3  | Sandia  | 78.8  | Uñas      | 73.8  | Lampara    | 63.8  |
| Chicle  | 100   | Flor       | 91.3  | Leche     | 86.3  | Pájaro  | 77.5  | Escaleras | 72.5  | Anaranjado | 63.8  |
| Cuchara | 100   | Libro      | 90    | Pescado   | 86.3  | Rojo    | 77.5  | Guitarra  | 70    | Árbol      | 62.5  |
| Huevos  | 100   | Manzana    | 88.8  | Reloj     | 85    | Pared   | 76.3  | Cuatro    | 70    | Plátano    | 62.5  |
| Jugo    | 97.5  | Pantalones | 88.8  | Teléfono  | 85    | Yoyó    | 75    | Azul      | 68.8  | Blanco     | 62.5  |
| Zapatos | 97.5  | Oreja      | 88.8  | Boca      | 85    | Escoba  | 73.8  | Caliente  | 66.3  | Amarillo   | 61.3  |
| Dientes | 97.5  | Espejo     | 87.5  | Vestido   | 83.8  | Falda   | 73.8  | Negro     | 66.3  | Muñeca     | 57.5  |
| Llaves  | 96.3  | Guantes    | 87.5  | Lengua    | 83.8  | Galleta | 73.8  | Mariposa  | 65    | Escuela    | 56.3  |
| Nariz   | 95    | Jabón      | 87.5  | Tres      | 81.3  | Lapis   | 73.8  | Verde     | 65    | Estufa     | 55    |
| Ojos    | 95    | Frio       | 87.5  | Conejo    | 80    | Dedos   | 73.8  | Crema     | 63.8  | Globo      | 47.5  |

\*Measured in percent (N=20) / Age = 3:0 – 4:11 (years:months)

## Summary

Sixty words were administered to 20 Spanish-speaking 3- and 4-year-old children in Kansas to determine which words were named most readily. Children were found to name some words more readily than others, including body parts and food/drink items. Words not identified readily will be removed from the list of prospective Spanish phonological assessment stimuli. Future research should consider additional Spanish words known to be spoken frequently by Spanish-speaking children and also involve the use of selected words with children who speak other dialects of Spanish (e.g., Puerto Rican, Cuban) to further validate the list for assessment purposes.

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