

Assessment and Treatment of Culturally and Linguistically Diverse
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Spanish Articulation For the Spanish-Challenged Clinician

by

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Presentation Outline:

Introduction

Spanish Phonology

Overview of Assessment Considerations

Assessment Instruments

Treatment Issues

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Spanish Articulation

For the Spanish-Challenged Clinician

Special Considerations

In Spanish, 18 consonants

In English, 23 consonants

There are no “English” /r/ , /h/, /z/ /sh/ or /zh/ sounds.
Final consonants in Spanish are limited to /s, n, l, r, d/

The Spanish Phonological System

18 consonants

/p, b/	/t, d/	/k, g/
/f/	/x/	/s/
/w/	/j/	/tʃ/
/l/	/r/	/rr/
/m, n/	/ɲ/	

Only Five Vowels

/i/ as in ‘see’

/o/ as in ‘boat’

/u/ as in ‘too’

/a/ as in ‘lot’

/e/ as in ‘say’

Contrasting Spanish and English Phonology

Similar or identical distinctive features:

/m/ /n/ /t/ /k/

/s/ /ch/

/l/ /w/ (hu, gu) Guatemala

/f/ /y/ (ll) caballo

Contrasting Spanish and English Phonology

Different distinctive features

■/b/ bilabial fricative	bebé /beβé/
/p/ less plosive	papel
■/d/ alveolar fricative	dedo /deðo/
■/g/ velar fricative	jugo
■/r/ tapped	cuchara
■/rr/ tap trill	perro
■/x/ velar fricative	Mexico
■/ñ/ as in canyon	baño

Assessment Considerations

Criterion-reference vs Standardized

Use of Interpreters

Regional differences in dialect

Bilingual ?

Spanish as ESL (Indian languages)

Phonological Interferences

Intelligibility in connected speech

Preponderance of multi-syllabic words

The Evaluation

Spanish Articulation Measures

Mattes 1987

- Criterion-referenced
- Ages: preschool and older
- Screening instrument
- Sound stimulability in syllables
- Spontaneous word production
- Consonant clusters
- Conversational production

Preschool Language Scale-4 Articulation Screener (Spanish)

Zimmerman, et al 2003

- Standardized
- Ages: preschool

Cut- off scores:

Within typical limits

May warrant further evaluation

Further evaluation strongly suggested

Spanish Preschool Articulation Test
Tsugawa, 2001

Standardized, percentiles

Ages: 2-6 to 5-6 years

Consonant singletons only

Administration time: 5-10 minutes

Assessment of Phonological Processes- Spanish
Hodson, 1996

■ Analysis of phonological processes

— Author discounts current computer programs for analysis.

■ Ages: preschool and older

Spanish Phonological System:

The Spanish phonological system includes specific English sounds, omits others, but has other unique phonemes. The SPAT includes these Spanish phonemes (eg .ñ ,b, ɛ, single tap /r/, tap trill /r/). The test also allows for some dialectical variations common to the Mexican population residing in the United States.

Descriptions for the consonantal sounds used by most speakers of American Spanish follow (adapted from Mattes, 1995):

Phoneme /b/:

This phoneme is a voiced, bilabial stop in initial position words and following /m/. In all other contexts, it is a voiced, bilabial fricative /b/. In contrast to the English /b/, it is produced without aspiration.

Phoneme /ch/:

This phoneme is a voiceless, palatal fricative. It is similar to the English /ch/ and , in allophonic variations, resembles the /sh/ sound.

Phoneme /d/:

This phoneme is a voiced, dental stop in initial position words and following /n/ and /l/. In all other contexts, it is a voiced, dental fricative /d/.

Phoneme /f/:

This phoneme is a voiceless, labiodental fricative and is similar to the English /f/.

Phoneme /g/:

This phoneme is a voiced, velar stop in initial position words and following /n/. In all other contexts, it is produced as a voiced, velar fricative /g/.

Phoneme /k/:

This phoneme is a voiceless, velar stop but generally produced without aspiration in Spanish.

Phoneme /l/:

This phoneme is produced as a voiced, alveolar lateral in most contexts but tends to be dentalized when following a dental consonant.

Phoneme /m/:

This phoneme is a voiced, bilabial nasal and is similar to the English /m/.

Phoneme /n/:

This phoneme is a voiced, alveolar nasal and is similar to the English /n/ in initial position.. However, it has numerous allophonic variations depending on its neighboring consonant.

Phoneme /ɲ/:

This phoneme is a voiced, palatal nasal. Production of this sound is a cluster of /ny/ (eg. Canyon).

Phoneme /p/:

This phoneme is a voiceless, bilabial stop. It is similar to the English /p/ but is unaspirated.

Phoneme /r/: This phoneme is a voiced, alveolar tap. It is produced by tapping the tongue on the alveolar ridge (like the /d/ sound), but with a small portion of the tongue blade touching the hard palate. This sound occurs only in medial and final position words.

Phoneme /rr/:

This phoneme is a voiced., alveolar trill represented by the letter /r/ in initial position words and by /rr/ in between vowels.

Phoneme /s/: This phoneme is a voiceless, alveolar fricative, similar to the English /s/ in Mexcian Spanish. Numerous allophonic variations exist in other parts of Latin America and Spain.

Phoneme /t/:

This phoneme is a voiceless, alveolar stop. It is similar to the English /t/ but is produced without aspiration.

Phoneme /w/:

This phoneme is a voiced, bilabio-velar fricative. It is represented by the letters hu, gu, and w in Spanish.

Phoneme /x/:

This phoneme is a voiceless, velar fricative. It is represented in Spanish by the letters g, j, x.

Phoneme /y/:

This phoneme is a voiced, palatal fricative similar to the /y/ in 'yes' and is represented in Spanish by the letters ll, hi, y. Allophonic variations include /dz/ and /zh/ in various Mexican dialects.

Table 5: Age of Customary Sound Production-Jiménez

The bar starts at the median age (50%) of customary production and stops at the upper age limits (90%) of customary production of Spanish consonants. The dashed lines represent data collected by Beatrice Jiménez (Jimenez, 1987). Bold Lines represent data collected for the SPAT normative sample. (Spanish preschool articulation Test, Tsujigawa, 2001).

AGE	3-0	3-3	3-7	3-11	4-3	4-7	4-11	5-3	5-7
p								
b								
t								
k								
f								
j-y								
w/gu								
ch								
m								
n								
d								
s								
x-h								
l								
r								
ñ								
rr								

Phonological Processes in English and Spanish

Examples (annotations by Kathi Hoffer)

<u>Omissions of Sound Segments</u>	ENGLISH	SPANISH
Syllables		
Reduction	baby--> /beɪ/	está--> /ta/
Weak syllable deletions	banana--> /nænə/	estampa--> /tar/
Multisyllabicity problems	contemporary--> /kɒntempəri/	murciélago--> /m/
Singleton consonant deletions		
Postvocalic (word final)	boat--> /boʊ/	pared--> /pare/
Intervocalic (medial)	bucket--> /bʌkt/	muñeca--> /mue/
Prevocalic (initial)	bat--> /æ/	guantes--> /ante/
Consonant sequences		
Reductions	truck--> /trʌk/	tren--> /ten/
Deletions	truck--> /rʌk/	tren--> /en/
<u>Glottal replacement</u>	bat--> /bæʔ/	gato--> /gatoʔ/
<u>Substitution</u>		
Place changes		
Fronting (posterior to anterior)	cat--> /pæt/	acá--> /ata/
Backing (anterior to posterior)	tea--> /bi/	pato--> /pako/
Palatalization	see--> /si/	sal--> /tsal/
Depalatalization	shoe--> /su/	chula--> /suta/
Manner changes		
Stopping	sun--> /tʌn/	azul--> /atʌl/
Gliding (substituting /w/ or /j/)	rock--> /wʌk/	lengua--> /weng/
Postvocalic Liquid Vowelization	car--> /kær/	flor--> /flo/
Affrication	ship--> /tʃɪp/	tela--> /tʃela/
Deaffrication	chip--> /ʃɪp/	chula--> /tʌla/
Vowel Neutralization	yellow--> /jʌlə/	un--> /ʌn/
<u>Assimilation Processes</u>		
Labial (regressive & progressive)	spoon--> /fpʊm/	sapo--> /papo/
Nasal	thumb--> /nʌm/	pan--> /man/
Velar	duck--> /gʌk/	rico--> /kiko/
Alveolar	gun--> /dʌn/	cuchara--> /tutʌ/
Palatal	juice--> /dʒʌs/	lechuga--> /letʃu/

Other Syllable-Structure of Context-Related Alterations

Metathesis	mask--> /mæks/	escoba--> /eksət/
Migration	smoke--> /mouks/	lata--> /tala/
Coalescence	smoke--> /foʊk/	flor--> /wor/
Reduplication	bottle--> /bɔbɔ/	teléfono--> /weu/
Epenthesis	black--> /bəlæb/	stress--> /estres/
Diminutive	dog--> /dagil/	"i"="ito": (not a phon. proc.)
Cluster Creation	sun--> /stʌn/	cama--> /kampa/

Voicing Alterations

Prevocalic voicing	cup--> /gʌp/	todo--> /dodo/
Prevocalic devoicing	gum--> /kʌm/	nada--> /tada/
Postvocalic devoicing (normal)	page--> /petʃ/	sed--> /set/

Minimal Place of Articulation Shifts (Intelligible)

/f,v,s,z/ for "th"	thumb--> /fʌm/	
/d,l/ for "r" or "rr"		
Frontal lisp (stridency maintained)	sun--> /sʌn/	rosa--> /dosa/
Other tongue protrusions	no--> /n̩o/	sol--> /s̩ol/
Lateral lisp	saw--> /s̩a/	no--> /n̩o/
		si--> /s̩i/

Spanish Phonological Interferences

The Spanish language has its roots in Latin. It is a phonetic language.

Some families who are immigrating from Latin America do not speak Spanish. Many of these families are "Indios." They speak their own native languages and may not know any Spanish.

Interference	Sound	Example
Substitution	s/z	sebra/zebra
	sh/ch	share/chair
	ch/sh	chair/share
	d/th	dat/that
	t/th	tief/thief
	v/th	faver/father
	s/th	sin/thin
	sh/th	wish/with
	k/j	Duty/Judy
	y/j	Yoe/Joe
	sh/j	fush/fudge
	n/ng	sin/sing
	f/v	fan/van
	b/v	berry/very
	U/u	pull/pool
	i/I	cheap/chip
	∂/o	call/coal
esp/sp	Espanish/Spanish	
Deletion of Final Consonants	b, p, g, m, t, k, d, f	ca/cab; hi/hip; ba/bag; etc.
Initial and Final Consonant Cluster Reduction	ie:, st, sp, sk, sl, sw, sn, st, sp, sk, etc.	top/stop, ris/risk, etc.
Difficulty with some vowels	/I/	bit
	/e/	bait
	/æ/	bat
	/u/	boot
	/o/	boat