Pronunciation Needs Assessment: Sandra

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Learner Background

Sandra* is a 36-year-old woman from Mexico who has been living in the U.S. for 18 years. Her first language (L1) is Spanish. She had some limited exposure to English in high school in Mexico but says she didn't pay much attention in English class and didn't learn much until arriving in the U.S. She has studied English sporadically in various noncredit adult ESL programs here in the U.S. but has achieved only a low beginning level of proficiency due to being surrounded by a strong Spanish-speaking community.

According to Coe (in Swan & Smith, 1987), Spanish speakers can be expected to experience "difficulty in recognizing and producing English vowels, along with "even sentence rhythm, without the typical prominences of English, making understanding difficult for English listeners" (p. 73). A few of the specific problem areas noted by Coe that can be expected for Spanish speakers are detailed below (pp. 73-77):

- Confusion between the /iː/ of *seat* and the /ɪ/ of *sit*

- Confusion between /ɑː/ of *cart*, /æ/ of *cat*, and /ʌ/ of *cut*

- Replacing /ə/ (as in the first syllable of *about) with* "the strong pronunciation of the written vowel" since /ə/ has no similarity to Spanish vowels

- Confusion between /b/ and /v/ because Spanish has only one sound that is orthographically represented by either *b* or *v*

- Substituting /s/ for /z/ since /z/ doesn't exist in Spanish

- Substituting /dʒ/ for /y/ as in *yes*

- Reducing consonant clusters because they are less frequent in Spanish

*Name has been changed

- Adding an /ɛ/ sound to the beginning of words starting in /s/ + consonant *(stop becomes 'estop')* because this consonant cluster never occurs at the beginning of a word in Spanish

- Using even stress and rhythm since Spanish is a syllable-timed language

- Possibility for a narrower pitch range, although Coe predicts this feature specifically for speakers of European Spanish (p. 77).

These predictions are consistent with my experience with students with a Spanish L1, and I therefore anticipated finding many of these features in Sandra's pronunciation of English.

Procedures

For this needs assessment, I met one time with Sandra for a face-to-face meeting and asked her to read two short diagnostic reading passages [Appendix A]. These passages were selected based on Sandra's level of reading proficiency in English and the anticipated familiarity of the content. I began with a short dialogue in which I read one part and Sandra read the other. I felt that starting with a simple dialogue (in which I was also a participant) would help minimize any anxiety she might feel. We read through this dialogue once to practice and I repeated a few words where she was unsure of the pronunciation. I then made an audio recording of the dialogue. For the second reading section, I began by reading the passage to Sandra two times at a slow pace and repeating words as needed when she requested clarification. I then allowed her to read aloud to practice until she felt comfortable with the reading. Celce-Murcia, Brinton, & Goodwin (2010) advocate for this approach, claiming that "allowing learners to rehearse until they feel comfortable reading the passage aloud will allow the teacher to obtain the truest sampling of individual errors" (p. 314).

In the free-speech sample, I asked Sandra to tell me about her family, a topic I felt would be familiar and comfortable for her. While recording, I interacted with her as needed to prompt her with a word she couldn't think of, or to guide the topic, helping her think of additional things to say.

After meeting with Sandra, I transcribed the free-speech recording to standard orthography [Appendix B] and listened to all three sections multiple times, making note of inaccurate pronunciations. I also selected a portion of the second reading passage and the free-speech segment and transcribed all inaccuracies using the International Phonetic Alphabet (IPA). I then grouped all misarticulations by category to determine the most prevalent problem areas for Sandra [Table 1]. I further separated these categories by which features were predictable for a learner with Spanish L1 and those that were unexpected.

Finally, I chose four instructional priorities for Sandra based on some of her most frequent misarticulations also representing a high functional load (Brown, 1991) and proposed a few helpful strategies and techniques for addressing these problem areas.

Pronunciation Competence

Sandra's pronunciation was consistent with many of the expectations for Spanish speakers, both based on Coe's (1987) predicted features and on my own experience teaching native Spanish speakers (and as a nonnative speaker of Spanish). One feature was a lack of differentiation between /v/ and /b/. Although only one instance is noted in Table 1 below (*very* pronounced *'berry')*, most occurrences of /b/ were produced as a softer version of the English sound, and /v/ was generally non-fricative in nature. Thus, both /b/ and /v/ tend to sound

somewhat 'in between' these two English segments. (See note [1] below Table 1 for further explanation.)

Another predictable misarticulation was that vowels represented orthographically in English by *o*, whether pronounced /ʌ/ (as in *other, brother*) or /ɑ/ (as in *holiday, got*) were pronounced /ow/. Although not mentioned specifically by Coe, this is consistent with the Spanish pronunciation of the sound with the orthographic representation *o*. This is especially to be expected when the learner is reading, as they are more focused on the way words are spelled, but since this also occurred in Sandra's free speech sample (e.g., *soccer* pronounced /sowkɛr/), it indicated that she has an awareness of how the word is written and is applying the Spanish pronunciation of *o*. Also problematic was the /r/-colored vowel /ɜʳ/. Depending on the spelling of the word, Sandra substituted /ɔr/ (*work*), /ɛr/ (*serve, other*), or /ɪr/ (*first*). Again, this is consistent with the Spanish phonetic interpretations of these orthographic representations.

Sandra also mispronounced /ɪ/ as /iy/ in multiple instances, both in the reading and free-speech samples (*this, it, live, ticket*), a common problem area for Spanish-speakers. Another common issue among speakers of Latin American Spanish is a difficulty pronouncing /θ/, which presented itself with the word *everything* (pronounced /evriytɪŋ/[2]). Consonant clusters were also simplified (*hardly*, omitting the /d/, and *first*, omitting the /t/) as Coe predicts.

A few unexpected misarticulations also presented themselves. Sandra's most prevalent pronunciation error was the omission of final /t/ (e.g., *not, can't, most, went*) which occurred eight times in the samples collected. This was not predicted in Coe's list of problem areas and was the first time I have noticed this issue with Spanish speaking learners. However, since a final /t/ is often unreleased in connected speech (Celce-Murcia, Brinton, and Goodwin, 2010, p. 167), this simplification does not present a significant hindrance to comprehensibility.

Sandra also substituted /ɛ/ for /iy/ in a couple cases (*even* pronounced /ɛvən/, *speeding* pronounced */spɛd*ɪŋ/). Although difficulty with /iy/ is to be expected for Spanish speakers (Celce-Murcia, Brinton, and Goodwin [2010] point out that "students from language backgrounds without glided vowels will have particular difficulty producing /iy/"), it would be more expected to substitute /ɪ/ rather than /ɛ/ (Celce-Murcia, Brinton, and Goodwin, 2010, p. 119).

A couple of common problem areas were surprisingly absent in Sandra's speech; namely, substituting /dʒ/ for /y/ as in *yes,* and adding an /ɛ/ sound to the beginning of words starting in /s/ + consonant *(stop becomes 'estop').* This may indicate that these are problem areas that Sandra is aware of and was consciously avoiding, or that she has previously worked to overcome.

It was more challenging to perceive the suprasegmental features of Sandra's pronunciation, due to the fact that she is at a lower level of English proficiency and lacks fluency. There were a few instances of incongruous intonation for the context within the reading passages, such as failure to use falling intonation at the end of some sentences, but this could be attributed to unfamiliarity with the text. In the free-speech segment, Sandra's intonation sounded more natural but was somewhat monotone and didn't vary much except for at the end of sentences. Stress patterns were fairly even, consistent with Coe's (1987) predictions for Spanish speakers, but word stress was somewhat difficult to ascertain due to frequent pauses and a slow, halting pace of speech. Additionally, Sandra sometimes placed more stress on words that she wasn't sure about, or when she figured out the right word after thinking about it, creating awkward stress patterns in the utterance.

The samples below are excerpts from Sandra's second diagnostic reading passage and the free-speech segment, respectively. Nonstandard pronunciations are highlighted, with IPA transcriptions of Sandra's pronunciation below the orthographic approximation. It is clear from

the examples below that Sandra struggles more with pronunciation when reading than during extemporaneous speech, perhaps because she encountered unfamiliar vocabulary in the reading passage, while she was able to use familiar vocabulary for the free-speech sample.

Diagnostic Reading Sample

This has been the most terrible day! Everything went wrong! First of all, I couldn't find my keys.

Thees hahs been da mos terrible day! Everting wen roang. Fierce of oal, I cooden find my keys.

/ðiys/ /hɑs/   /dɑ/ /mows/   /evɜˈtɪŋ/ /wɛn/ /rowŋ/ /fɪrs/   /owl/ /kuwdən/

Then, I knew I was going to be late to work, so I drove too fast, and a cop gave me a speeding

Den, I nee-oo eyes going to be lay to woark, so I drove too fahs, an a cope gave me a spedding

/dɛn/ /niyuw/ /ayz/   /ley/   /wɔrk/   /fɑs/ /æn/ /cowp/   /spɛdɪŋ/

ticket.

teeket.

/tiykət/

Free Speech Sample

Bethany: So, tell me, do you have brothers and sisters?

Sandra: Me?

Bethany: Yes.

Sandra: Yeah. Um, I have, uh, five sister and two brother. Yeah.

               Yeah. Um, I hab[1] uh, five sis-tare and two broa-there. Yeah.

                       /hæb/[1]   /sɪsteyr/   /browðeyr/

Bethany: Okay. Big family.

Sandra: Yeah, is big. And me is the little baby. [laughs]

               Yeah, is big. And me iss the lee-tle baby.

                               /ɪs/   /liyɾəl/

Bethany: Oh! [laughs] You're the baby of the family.

Sandra: Um, my second brother, um, live *en Tejas*, Texas, and, uh, other

                Um, my secon broa-there, um leave en Tay-hahs, Texas, and, uh, oh-there

                /sɛkən/ /browðeyr/   /liyv/ /ɛn/ /teyhɑs/   /owðeyr/

                brothers and sisters in Mexico.

                broa-theres and sis-tares in Mexico.

                /browðeyrs/   /sɪsteyrs/

        The table below summarizes Sandra's misarticulations, grouping them by phonetic

category.

Table 1: Pronunciation Inaccuracies

Problem Area:	Example Word(s):	Pronounced like:
Omission of final /t/	*not*	/now/ *'no'*
	can't	/kæn/ *'can'*
	most	/mows/ *'mos'*
	went	/wɛn/ *'wen'*
	first	/fɪrs/ *'fierce'*
	couldn't	/kuwdən/ *'cooden'*
	late	/ley/ *'lay'*
	fast	/fɑs/ *'fahs'*
/v/ vs. /b/	*very*	/bɛriy/ *'berry'*[1]
Consonant cluster reduction	*hardly*	/hɑrliy/ *'harly'*
	first	/fɪrs/ *'fierce'*
/θ/	*everything*	/evriytɪŋ/ *'everyting'*[2]
/ɪ/ vs. /iy/	*this*	/ðiys/ *'thees'*
	it	/iyt/ *'eat'*
	live	/liyv/ *'leave'*
	holiday	/howliydey/ *'holy-day'*
	little	/liyɾəl/ 'lee-tle'
	ticket	/tiykət/ 'teeket'
/iy/ vs. /ɛ/	*even*	/ɛvən/ *'Evan'*

	speeding	*/spɛdɪŋ/ 'spedding'*
/ɜʳ/ vs. /ɔr/	*work*	/wɔrk/ *'woark'*
/ɜʳ/ vs. /ɛr/	*serve*	/sɛrv/ *'sairv'*
	other	/owðɛr/ *'oh-there'*
	soccer	/sowkɛr/ *'so-care'*
	brother	/browðeyr/ *'broa-there'*
	sister	/sɪsteyr/ 'sis-tare'
/ɜʳ/ vs. /ɪr/	*first*	/fɪrs/ *'fierce'*
/ʌ/ vs. /ow/	*other*	/owðɛr/ *'oh-there'*
	brother	/browðeyr/ *'broa-there'*
/ɑ/ vs. /ow/	*holiday*	/howliydey/ *'holy-day'*
	got	/gowt/ *'goat'*
	soccer	/sowkɛr/ *'so-care'*
	cop	/cowp/ *'cope'*

[1] The sound represented here as */b/* can be written orthographically in Spanish as *v* or *b* and sounds somewhat like a soft /b/ but is labiodental rather than bilabial. It is produced with the mouth in approximately the same position as used to produce /v/, with the top teeth touching the bottom lip.

[2]The sound represented here as */t/* is written orthographically in Spanish as *t* and sounds somewhat like a /d/ or /ð/. It is produced with the tongue against the back of the top front teeth.

Instructional Objectives and Strategies

The following instructional priorities are listed in order of importance based on Sandra's needs and the significance of the problem area. For each objective, some possible strategies and techniques are proposed that could be helpful for Sandra or other learners struggling with the same pronunciation difficulty.

Objective 1: /iy/ vs. /ɪ/

This segmental distinction was chosen as the first priority for Sandra due to its high functional load, based on Brown's (1991) list of problematic sound distinctions (in Celce-Murcia, Brinton, & Goodwin, 2010, p. 471) and also because of the prevalence of this pronunciation problem for Sandra, with six recorded instances of confusion between these sounds (see Table 1).

Bowen's (1972) technique for minimal pair practice could be a useful strategy for raising awareness and practicing the distinction between these two sounds. The Bowen technique consists of a series of graduated steps to guide learners through the process of working from recognizing to producing minimal pair sentences (e.g. Will he leave here?/ Will he live here?) using gestures and pictures (in Celce-Murcia, Brinton, & Goodwin, 2010, p. 147). A dialogue using parts of the body containing /iy/ and /ɪ/ could also help in practicing this sound distinction. In pairs, students can use the following dialogue, filling in the blanks with one /iy/ word (e.g. *heel, knee*) and one /ɪ/ word (e.g. *shin, wrist*), and switching roles after completing one exchange:

A: "Are you okay?"

B: "No, my ___ and my ___ hurt."

Apps like *Pronuncian* (Nguyen, 2008) and *Juna* (Bartholomew, 2018) could also be recommended for supplemental practice of this segmental contrast.

Objective 2: Sound-Spelling Correspondence

Since Sandra struggled with pronunciation more when she was reading than when she was speaking extemporaneously, instruction on the different orthographic representations of sounds (with an emphasis on vowel sounds) could be helpful. Teaching vowel sounds with a focus on the relationship between sound and spelling is one of Gilbert's (2001) priorities for beginning language learners (in Celce-Murcia, Brinton, & Goodwin, 2010, p. 474).

One useful strategy could be to teach Gilbert's (2001) "alphabet" and "relative" vowel sounds along with the corresponding simplified "two-vowel" and "one-vowel" rules (in Celce-Murcia, Brinton, & Goodwin, 2010, pp. 442-443). These sounds could subsequently be practiced by playing tense (alphabet) and lax (relative) Bingo (Celce-Murcia, Brinton, & Goodwin, 2010,

p. 427). An additional resource is the *Pronuncian* app (Nguyen, 2008), which provides possible spellings and example words for each sound, and could be used for supplemental practice.

Objective 3: Consonant Clusters

Because of the problematic nature of consonant clusters (as evidenced by Sandra's difficulty pronouncing the word *hardly)*, and the tendency for Spanish speakers to reduce consonant clusters (Coe, 1987), this would be an appropriate instructional priority for Sandra.

Consonant clusters can be practiced by breaking down the cluster and adding one letter at a time, for example, *rap – trap – strap* (Celce-Murcia, Brinton, & Goodwin, 2010, p. 105). To practice adding the *-ly* ending to words ending in a consonant, cards with consonant-final adjectives that can be made into adverbs by adding *-ly* (e.g., *bad, brave, correct, quick*) are placed on a table, and another card with *-ly* is joined to each word in turn. The student first says the segments separately (i.e., *bad. . . . ly*), and then gradually links them together by decreasing the pause between the two segments (i.e., *bad. . . . ly, bad. . . ly, bad. . ly, bad. ly, badly*).

Objective 4: Rhythm and Stress

This suprasegmental area is assigned the lowest priority due to Sandra's low level of fluency and overall English proficiency. After a slightly higher level of fluency is achieved, it would be beneficial to begin introducing basic suprasegmental concepts such as stressing content words. This will give listeners "acoustic clues to structure and meaning" which are often lacking when Spanish speakers use even stress and rhythm, and thereby increase comprehensibility (Coe, 1987).

One technique to raise consciousness about the unstressed nature of function words is to play a game of memory with one set of cards containing function words (e.g., *on, and, is*) and

another set with short phrases where the function word is missing (e.g., *right__ time, ham __*

eggs, time__ money). Students try to match the function words to the corresponding phrase and

then pronounce the phrase, noticing the lack of stress on the function words (Celce-Murcia,

Brinton, & Goodwin, 2010, p. 214). Rhythm drills, repeated while tapping or clapping (e.g.,

overlook/ tell the cook, guarantee/ can't you see), could also be useful in raising awareness of

stress at the word and sentence levels (Celce-Murcia, Brinton, & Goodwin, 2010, p. 213).

Conclusion

Sandra is a good example of a beginning level English learner exhibiting many of the

pronunciation difficulties common to Spanish speakers. Although not all her misarticulations are

likely to cause confusion, she would benefit from instruction and practice targeting some of the

key areas that have the potential to improve her overall intelligibility. Even at a low level of

proficiency and fluency, learners can target strategic pronunciation features and begin building a

foundation for effective communication.

References

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Appendix A

Diagnostic Reading Passages

Dialogue:

Bethany: Do you like to play volleyball?

Sandra: Not very much.

B: But it's fun!

S: I can't serve the ball.

B: You just have to keep working at it.

S: But I never get the ball over the net.

B: Never?

S: Well, hardly ever. Besides that, I always bump into the other players.

B: Hmm. Then maybe you'd better try bowling.[1]

Reading Passage:

This has been the most terrible day! Everything went wrong! First of all, I couldn't find my keys. Then, I knew I was going to be late to work, so I drove too fast, and a cop gave me a speeding ticket. When the officer asked for my driver's license, I realized that I had left it at home! As a result, the fine will be even higher. After that, I got a flat tire and had to change it, which took even more time. Finally, when I arrived at work, I remembered that it was a holiday, and the office was closed![2]

[1]Taken from Gilbert (2005) p. 153.

[2]Taken from Gilbert (2005) p. 171.

Appendix B

Transcript of Extemporaneous Speech Sample

Bethany: So, Sandra*, tell me about your family.

Sandra: Hi, my name is Sandra, um, I have, um, beautiful family, um, I have two daughter
                and one son. Uh, my old daughter is Jessica*, has, uh, 15, and Jenny* is, uh,
                [pause] 13.

Bethany: [laughs] She just had her birthday.

Sandra: [laughs] Yeah. And my little son is, uh, 10.

Bethany: Okay.

Sandra: Um, my son [pause] my son, um, play, uh, soccer, and my daughter Jessica, uh
                play, uh, soccer. Yeah. And. . .

Bethany: Okay. Jenny no?

Sandra: No. My three kids, um, [pause, whispers *van?*]

Bethany: [prompts] Go. . .

Sandra: . . .   go, uh, music class, the Jessica, is, uh, play guitar and Jenny, uh, play piano, and
                Joel* [son], ehh, play drums.

Bethany: Okay. Where, where do they take music lessons? Where do they go for music
                classes?

Sandra: Uhhh. . .

Bethany: Do they, do they go to classes in Iowa City?

Sandra: Oh yeah, in West Music.

Bethany: Oh, in West Music. Okay.

Sandra: Yeah.

*Names have been changed

Bethany: And how, how do the kids do in school? Do they like school? What are, what are your kids interested in, in school? [pause] Um, *sus intereses. . . qué les gusta de la escuela?*

Sandra: Oh, yeah. . . is, uh, the deport. . .

Bethany: Sports?

Sandra: Yeah. And, and music. Yeah.

Bethany: Okay. Okay. Um, so tell me, do you have brothers and sisters?

Sandra: Me?

Bethany: Yes.

Sandra: Yeah. Um, I have, uh, five sister and two brother. Yeah.

Bethany: Okay. Big family.

Sandra: Yeah, is big. And me is the little baby. [laughs]

Bethany: Oh! [laughs] You're the baby of the family.

Sandra: Um, my second brother, uh, live *en Tejas*, Texas, and other brothers and sisters in Mexico.

Bethany: Okay. So just you, only you and your brother are in the United States.

Sandra: Mm hmm. And nephews in Texas.

Bethany: Okay. And, um, tell me about your husband. . . how long have you been married?

Sandra: Um, 17 years, the married.

Bethany: Okay.

Sandra: I live and my husband is 20 years. . . here.

Bethany: Okay. Okay. Well thank you for telling me about your family.

Sandra: You're welcome. [laughs]