

Research Statement

David Counselman

Research interests

The objective of my research is to find ways to help second language (L2) learners improve their accent in their L2. This line of research involves not only investigating the pronunciation of L2 learners but also native speakers' perception of a foreign accent. Understanding which characteristics of non-native speech production are detected by native speakers will be crucial for knowing what to teach L2 learners about their pronunciation. As strides are made in this area, my research will also seek to find effective and efficient ways to incorporate pronunciation instruction into the classroom without disrupting the current design of L2 curricula.

Dissertation project

My dissertation is motivated by the premise that perception precedes production in the acquisition of new speech sounds. This idea is suggested by the Speech Learning Model (SLM: Flege, 1995), which proposes a process whereby non-native speech sounds are acquired. Specifically, the SLM predicts that non-native speech sounds must be perceived correctly before they can be articulated correctly. This prediction is also supported by research on perceptual training in laboratory settings. Studies involving L2 learners and children with phonological impairments have shown that perceptual training of difficult speech sounds leads to improvement in the production of those sounds (Bradlow et al. 1997, 1999; Jameison and Rvachew 1992, 1994). In my dissertation, I extend these findings to the L2 classroom by comparing the impact of a production-based and perception-based assignment on L2 learners' improvement in pronunciation over a semester. Students completing the production-based assignment submitted five recordings of themselves and received feedback from the instructor on each one. Students receiving the perception-based assignment listened to five recordings of native English speakers speaking Spanish and signaled erroneous pronunciations on a script, indicating how the pronunciation was erroneous. In this study, I focus on the pronunciation of /e/ and /o/ because Spanish speakers often imitate Americans' mispronunciation of these vowels when imitating American-accented speech, which suggests that the mispronunciation of these vowels contributes to the perception of an American accent. In addition, I quantified each learner's accuracy in the production of these vowels because previous studies examining L2 vowel production have considered the production of these vowels as either *target-like* or *not-target-like*, with no regard for gradient improvement (e.g. Elliott, 1997). To achieve this, I recorded each learner reading single words at the beginning and end of the semester and measured the vowel formants throughout the articulation of each target vowel. The results of this study showed that the learners receiving the perception-oriented assignment significantly improved their pronunciation of /e/ and /o/ while the other learners did not. This finding suggested that perception-based training in the classroom leads to greater improvement in pronunciation of /e/ and /o/ than production-based training. The pedagogical implications of these results are that directors of L2 programs should consider the use of perception-based assignments and training in L2 classrooms.

Research goals for the next five years

There are several questions I am preparing to investigate as extensions of my dissertation project. These questions are also part of a larger, long-term research agenda that I will pursue over the next several years. First, I will investigate whether the improvement found for single words also extends to contexts of more naturalistic speech. Using the same methodological design as I use in my dissertation, I will measure students' improvement in pronunciation at the phrasal level and in spontaneous speech. I will also explore whether improvement found for the vowels /e/ and /o/ extends to other segmental productions that have commonly been investigated in studies of L2 Spanish pronunciation learning, such as /p/, /t/, /k/, /b/, /d/, /g/, /l/ and /r/.

Another continuation of my dissertation research will be to investigate the extent to which L2 Spanish learners must improve their pronunciation of /e/ and /o/ for native Spanish speakers to perceive them as target-like. Obtaining insight into this question requires understanding how native Spanish speakers perceive the sounds /e/ and /o/ when spoken by native English speakers. The results of my dissertation suggest that L2 Spanish learners' pronunciation of /e/ and /o/ does not instantly become target-like, but rather that it gradually improves over time. What is not known, however, is how much improvement is needed for native Spanish speakers to hear /e/ and /o/ as target-like. I will approach this area of inquiry by obtaining native Spanish speakers' perceptual responses on tasks that expose them to productions of /e/ and /o/ along a continuum from *American-like* to *target-like*. Recognizing how native Spanish speakers perceive these continua will help in understanding how much improvement with the diphthongization of /e/ and /o/ is necessary for learners of Spanish.

After investigating the questions mentioned above, I plan to seek external funding (NSF) to examine how differences in English and Spanish phonological patterns impact native Spanish speakers' perception of American-accented speech. For example, in my dissertation, I focus on /e/ and /o/ because there is evidence that non-target-like articulations of these vowels are salient to native Spanish speakers. Nevertheless, there are other differences in the phonologies of English and Spanish that contribute to English speakers' foreign accent when speaking Spanish. What is unclear is which aspects of English phonology, when transferred to L2 Spanish, are most salient to native Spanish speakers as foreign. Do native Spanish speakers perceive pronunciation errors in both the consonants and the vowels? If so, which consonants or which vowels contribute the most to native Spanish speakers' perception of an American accent? With answers to these questions, language program coordinators and instructors of Spanish phonetics and phonology will know how to prioritize aspects of Spanish pronunciation to L2 learners.