

## TEACHING TIP

### USING SELFIES TO IMPROVE PROBLEMATIC ENGLISH CONSONANTS

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The pronunciation of English consonants is often taught on an articulatory basis, focusing on static descriptions of the segments (sounds) and their distinctive features. A limitation in typical English consonant training, however, is that it may fail to incorporate any explicit instruction on the underlying mechanisms that trigger and coordinate the movements of the articulators. This teaching tip introduces lip aperture and protrusion related to producing and differentiating the commonly problematic English consonants /l/, /r/, /w/, /f/, /z/, /tʃ/ and /dʒ/. Based on the underlying positions and movements, consonant lip-rounding categories for these sounds are proposed to simplify the noticing and understanding of the subtle underlying production mechanism. For explicit pronunciation instruction, teachers can use the selfie classroom activity described in this teacher tip to systematically raise awareness, provide explicit instruction, create a metalanguage, and practice the mechanisms behind the production of these English consonants.

## INTRODUCTION

Common challenges for learners from at least 14 different L1s include the struggle to accurately produce the following consonant sounds: /l/, /r/, /w/, /f/, /z/, /tʃ/, and /dʒ/ (Avery & Ehrlich, 1992). Pronunciation instruction of these consonants is often lacking information on the underlying mechanisms that enables articulation. According to articulatory phonology, “gestures are events that unfold during speech production and whose consequences can be observed in the movements of the speech articulators” (Browman & Goldstein, 1992, p. 23). A gesture can be thought of as the triggers or activities behind the positioning and motioning of the articulators (top/bottom lip, tongue, jaw). In this teaching tip, AG will be limited to the activities revolving around the lip involvement when producing the problematic English consonants /l/, /r/, /w/, /f/, /z/, /tʃ/, and /dʒ/ and will refer specifically to lip aperture (the actions of the upper lip, lower lip, and jaw) and lip protrusion (the degree to which the lips stick out).

An example of the cross-linguistic variation of underlying gestures can be found in a comparison of the Mandarin consonants written in Pinyin: *j*, *q*, and *x*, (e.g. /tʃ/, /tʃ<sup>h</sup>/, /ç/) versus the English consonants *j*, *ch*, and *sh* (e.g. /dʒ/, /tʃ/, and /ʃ/). The visual cues for the Mandarin sounds, for example, are a spread open-smile position<sup>1</sup>, while in contrast, the English consonants show more puckering and a slightly rounded lip position. These almost opposite gestures are due to the difference in aperture and protrusion—open/spread (not sticking out) in Mandarin versus more closed/slightly rounded (subtle puckering) in English—and demonstrate the difference in underlying mechanism used in sound production and coordination. Without explicit instruction, learners will not be aware of these “articulatory routines,” which started as discrete gestures (babbling) in childhood and became gross gestures in adulthood used to differentiate and coordinate speech production. For a Mandarin speaker of English, these gesture differences not only present production inaccuracies, but also create variation in the visual cues for listeners

(Bikerman, 2014; McGurk & MacDonald, 1976) and contribute to the lack of coordinating movements necessary for making connected speech.

To help teachers guide learners, this teaching tip proposes the description and use of consonant lip-rounding categories to facilitate the learning and differentiation of the problematic English consonants /l/, /r/, /w/, /ʃ/, /ʒ/, /tʃ/, and /dʒ/. Note that lip rounding is typically a feature of English vowels (rounded or unrounded), but here it describes the outcome of articulator triggers to make the positioning and motioning of articulators in consonant production. Unlike distinctive features, gestures do not map onto segments or features but underlie the articulator coordination that make them (Browman & Goldstein, 1992). *Consonant lip rounding* refers to the underlying gestures of lip aperture and protrusion in the production of these English consonants.

As a pedagogical technique, a selfie activity is recommended to start the process of orienting learners to gestures. A selfie is a digital self-portrait shared on the Internet (Johnson, Maiullo, Trembley, Werner, & Woolsey, 2014). Due to their popularity, selfies are being used as a pedagogical tool to engage learners in a variety of ways, including the ice-breaker selfie (Johnson et al., 2014), the mathematical selfie (Jaqua, 2017), and the post-library-instruction selfie (Meehlhause, 2016). Merits of the selfie pedagogical tool include increasing student engagement, building classroom community, bringing authentic real-world material into the classroom, and providing an assessment tool. In the current teaching tip, the selfie is used for raising students' awareness of lip positions and movements and metalanguage (having a language to talk about those target actions). Using selfies for noticing positions and movements is a starting point that can be followed with highlighting the descriptive language for classroom instruction and feedback (metalanguage) about lip rounding can be established, paving the way for explicit instruction and feedback to occur throughout the class.

Teachers are most effective when they are able to guide learners in finding and coordinating underlying motor skills to make sounds, words, and ultimately fluent speech production (Catford & Pisoni, 1970). Below, I describe what teachers need to know about (a) common English consonant problems, (b) lip rounding for these problematic consonants, and (c) a selfie classroom activity to introduce and practice consonant lip rounding.

## **WHAT TEACHERS NEED TO KNOW**

### **Common pronunciation challenges by L1s**

Specific language groups have pronunciation challenges with the English consonants /l/, /r/, /w/, /ʃ/, /ʒ/, /tʃ/, and /dʒ/. Table 1 lists 14 languages with their respective common English consonant problems (Avery & Ehrlich, 1992).

Table 1

*Common L1 consonant problems related to lip rounding*




	<i>Letters</i>	L	R	W	SH		CH	J
	<i>Sounds</i>	/l/	/r/	/w/	/ʃ/	/ʒ/	/tʃ/	/dʒ/
<b>LANGUAGE</b>	Arabic		✓ (trill)				✓	✓
	Chinese	✓		✓/w/ vs. /r/	✓	✓	✓	✓
	Farsi		✓ (trill)	✓/w/ vs. /v/				
	French		✓	✓/w/ vs. /r/			✓	✓
	German			✓/w/ vs. /r/				✓
	Greek		✓			✓	✓	
	Hindi			✓/w/ vs. /v/				
	Italian		✓ (trill)		✓	✓		✓
	Japanese		✓/r/ vs. /l/		✓/ʃ/ vs. /s/		✓/t/ vs. /tʃ/	
	Korean		✓/r/ vs. /l/		✓/ʃ/ vs. /s/			✓
	Polish	✓ /l/ vs. /w/	✓ (trill)		✓/ʃ/ vs. /s/			
	Portuguese	✓ /l/ vs. /w/				✓ /ʒ/ vs. /dʒ/	✓	✓
	Spanish		✓ (trill)		✓/ʃ/ vs. /s/			✓
	Vietnamese						✓	

**Consonant lip rounding**

In order to prepare learners to produce and differentiate problematic consonants, three types of lip rounding can be introduced. The titles—no lip rounding, slight lip rounding, and tight lip rounding (Edwards & Stratman, 1995)—describe the lip positions, which are the consequence of accurate underlying articulator mechanisms. In Table 2, the three types of lip rounding are displayed and described to show the fundamental differences in the production of the problematic consonants. It is important to note that these are static pictures but not static positions in speech. In other words, in the production of speech, lips will naturally move into and out of positioning to create target sounds and move on. Consonant lip rounding will naturally be influenced by surrounding vowels, for example, in the word “low” a no lip rounding /l/ would show lip rounding from the vowel /o/. It is because of these influences that gains in basic consonant lip-rounding accuracy will improve not only accuracy in the production of a target consonant, but also the development of connected speech (linking) since gestures enable the dexterity of articulators.

Table 2

*Lip rounding categories and sample pictures*

Type of Lip Rounding	No Lip Rounding	Slight Lip Rounding	Tight Lip Rounding
Gesture			
Description	Make the initial /l/ sound, as in “like,” and you will notice the mouth opens slightly to allow room for the tongue to position itself. The exterior of the lips shows no rounding.	Make the “sh” sound or say “Sssh!” You will notice the corners of the mouth engage and pucker, although the top of the lip does not move. The exterior of the lips shows a slight lip-rounding position.	Make the /w/ sound, as in “what,” and you will notice the top and bottom part of the lip engage strongly. The exterior of the lips shows a tight rounding position.
Differences	There is no engagement of exterior lip muscles, although the jaw drops ever so slightly.	The corners of the lips engage.	The top and bottom of the lips engage tightly.

**THE SELFIE TEACHING TIP**

**Tip:** Students will use cell phone cameras to take selfies of specific facial expressions and will then be asked to notice and describe the positions of the lips in the pictures.

**Level:** Appropriate for all levels

**Description:** This activity draws students’ attention to the lip-rounding positions and motions that facilitate familiarity with both the introduction of lip rounding for English consonants and the language to talk about these position and motions.

**Prerequisites:** Students will need to be familiar with these terms: *smile*, “*Shhh!*” and “*What?!?*”; *mouth*, *corners of mouth*, *lips*, *upper/bottom/top lip*, *spread lips*, *protruding (sticking out)*, *round*, *engage*, and *muscles*.

**Materials:** Cell-phone cameras in selfie mode; the list of facial expressions to make in each selfie (below); a list of adjectives to describe the lips (above)

## In-class selfie activity instructions

### 1. Selfie time

Tell students to get out their cell phones, open the camera app, and set it to selfie mode. Instruct them to take three pictures doing the following: a) smiling, b) saying, “Shhh!” and c) saying “What?!” stopping at the beginning of the word to capture making the /w/ sound.

### 2. Describe and discuss

After the selfies are taken, ask students to look at each picture and describe what they notice about their lips. To facilitate description and discussion, the following options are recommended, depending on the amount of available time and the best fit for the target group. Use think/pair/share: Have each individual jot down his or her thoughts, share them with a partner, and then discuss as an entire group. Alternatively, the instructor can model doing a think-aloud (to review adjectives) or students can discuss in small groups or describe and discuss as an entire group. The aim of this component of the activity is for learners to notice the differences in the lip positions and learn the descriptive language to talk about those positions and motions. Below are examples of types of descriptive points to highlight:

- a) Smile Selfie: Lips are spread; mouth may be closed, teeth may or may not show; corners of the lips go in (into the cheeks), not out. [Note: In versus out is very important for the next step.]
- b) “Shh!” Selfie: Muscles in the corner of the mouth are “on” (engaged/constricted); bottom lip and corners of lips stick out more than the top lip. [Note: Top lip should not stick out much in the next step.]
- c) “What?!” Selfie: Lips are tightly rounded to make /w/; top and bottom lip are equally engaged. [Note: The top lip muscle is “on” in the /w/ selfie, as opposed to the top lip being more “off” in the “Shhh!” selfie.]

### 3. Teaching three categories of lip rounding for consonants

Now that students are aware of differences in lip rounding, choose the common problem consonants or target sound(s) and present explicit instruction on the lip motion and characteristics for each sound (see Table 2).

### 4. Practicing lip rounding

In general, it is recommended that instructors assess needs, including which sound(s) are problematic and why (which characteristics are causing the problem); raise awareness of the letter/sound/spelling and lip motions and provide explicit instruction. Next, structure the move from step-by-step in “finding the sound”—that is, finding the coordination—to putting the lips in the position and making the movement. After the students make it, focus on helping them make it effortlessly and automatically.

## Trouble-shooting

1. **No lip rounding:** For learners whose lip position is accurate, ask them to relax the tongue to allow it to spread a bit more (this works particularly well for Japanese, Mandarin, and Korean speakers). Next, try to figure out where the tongue is hitting—behind the teeth, on the alveolar ridge, or above the alveolar ridge—and identify which part and how much of the tongue is making contact (see Raver-Lampman & Wilson, 2018).
2. **Slight lip rounding:** Two errors are common when learners attempt to make slight lip rounding. First, when they trigger their muscles, the corners of their lips will tend to go “in” as in the smile position. A good pre-exercise is to have students look in a mirror or camera and do an in/out motion—smile and then use the same muscles in the opposite direction so that the lips go out (something like a pout). Ask students to do this in a controlled manner in repetitions of five times in a row until it becomes easy. Next, ask them to just make the out motion. Again, repeat it five times or until it becomes controlled. A second error is that the learner will move the top lip too much or it will stick out like a duck bill. The instructor can ask the learners to put their index finger on the top lip to keep it from moving or use a finger or pen pressed gently against the center of the lips to hold down the top. This muscle isolation—moving the corners of the lips without rounding the top of the lip—can be quite challenging but underlies multiple consonants and promotes connected speech. If the top lip moves and constricts significantly, then the “sh” can sound like the /w/ sound. To differentiate, the muscle isolation (not moving the top lip) will need to be mastered.
3. **Tight lip rounding:** The most common error for this motion is that learners make the sound before getting into the position. The sound will then turn into “uuwh.” To help learners, be sure to instruct them to get in the position before making the sound. You can practice this by making the position without making any sound. Then, in a slow-motion drill, say, “Get in position.... (watch for tight lip rounding) ...okay, now make the sound.” They also do not need to pull back on the lips to get out of this position, but just simply relax the lips. In rapid speech, however, the motion will be influenced by the upcoming sounds.

## Sound-spelling correspondence

An additional barrier to pronunciation of problematic consonants is the lack of sound-spelling correspondence. In other words, English spelling often fails to transparently convey what the L2 learners’ articulators need to do to make sounds and word-level pronunciation. As a follow-up activity, teaching sound-spelling correspondence for the problematic consonants is recommended. Table 3 highlights the sound-spelling correspondence (Grant, 2010) and shows example words with the respective lip-rounding type. Teaching learners to translate spelling into accurate sound information for lip positions will trigger the gestures behind the production of the sounds and reduce some of the frustrating mystery behind pronunciation of these English consonants.

Table 3

*Lip rounding categories with sound-spelling correspondence*

Lip Rounding	Letter	Sound	English Spelling Correspondence	Examples
1. No	l	/l/	l-ll-	<b>listen, allow, able, full</b>
2. Slight	sh	/ʃ/	-sh-ti-ci-ssi/ssu-si	<b>English, motion, social, issue, machine</b>
		/ʒ/	-g-si/su-	<b>Garage, Asia, measure</b>
	ch	/tʃ/	-tu-	<b>Feature, situation</b>
	j	/dʒ/	-du-	<b>Individual, graduate</b>
3. Tight	r	/r/	-r*	<b>Row, reason, error, ear</b>
	w	/w/	-w-wh qu	<b>what, why, aware, follow quiet, question, equation</b>

**CONCLUDING REMARKS**

This teaching tip integrates instruction of articulatory gestures related to lip aperture and protrusion specific to problematic English consonants with a practical classroom technique for pronunciation improvement. Although an articulatory approach to English consonant training offers explicit information, learners may need additional help using their articulators to orchestrate the production of problematic English consonants. Adding instruction related to lip aperture and protrusion gives learners the opportunity to better understand what to change in order to have more success in learning difficult consonants. Using selfies as a pedagogical tool offers a fun and practical technique to introduce positions and motions of underlying mechanisms without ultrasound or using an MRI of underlying language specific gestures. Teachers are encouraged to practice and experiment with the demonstration of consonant lip rounding, as well as to observe their learners' L1 gestures in consonant production.

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<sup>i</sup> The difference also includes variation in tongue position, voicing and aspiration.