TEACHING TIP

IMPROVING INTELLIGIBILITY WITH PROSODIC MODELS

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Intonation is "long thought to be a key to effectiveness in spoken language" (Levis & Pickering, 2004). However, producing the expected pattern of intonation presents challenges for students, many of whom find that their production of English suprasegmentals is influenced by their L1, which can lead to obscured meaning. Fortunately, videos of the 3-Minute-Thesis competition (3MT®), held annually at hundreds of universities in over sixty countries, offer high-quality samples of clearly delivered presentations that students can use to model effective intonation. Each video is a short yet first-rate example of English filled with powerful template sentences "in which all levels of the prosodic system are present" (Gilbert, 2014, p. 130). This paper will demonstrate how two experienced practitioners have used 3MT videos to improve the intelligibility of intermediate-level university students. Current best practices covered in this paper include a focus on suprasegmentals, the analysis of authentic language, the importance of target language perception, and the use of gesture to enhance communication. Also, since 3MT presenters are often NNS of English, they serve as valuable "aspirational models" (Murphy, 2014). Though the focus here is primarily on 3MT talks as pronunciation models, our framework can be easily adapted to other models.

INTRODUCTION

Intonation plays "a significant role in communicating to others how we want to be understood" (Pickering, 2018, p. 71). In addition, an increasing amount of research demonstrates that explicit instruction in intonation and other suprasegmental features of language can lead to significant gains in NNS intelligibility, or the extent to which a speaker can be understood (Grant, 2014). As practitioners, then, it behooves us to focus on elements of speech that can lead to improved intelligibility, such as appropriate pausing, syllable stress, prominence, and intonation, in our classrooms. In this paper, we aim to provide practitioners, whether novice or veteran, with engaging, authentic activities that can help intermediate to advanced students improve their intonation. Each of the teaching tips presented is based on research-based best practices and has been refined through many years of classroom application in various academic settings.

The authors taught at the same university for several years and continue to collaborate and present together, both nationally internationally, on the teaching of pronunciation. The tips below resulted from classroom activities related to the Three-Minute Thesis (3MT®) competition, a speaking event founded in 2008 and now held annually at hundreds of universities across the globe (University of Queensland, 2018). The graduate students who most successfully and clearly explain their research to a non-specialist audience win the competition and their videos are often featured on the university's YouTube channel.

Background on Tips 1-3

The first 3 teaching tips were designed for and have been used successfully in an English language support program for NNS graduate students. Using Three Minute Thesis videos as models is a natural fit for this student population since communicating about research is a vital part of their academic lives. The students come from a variety of language backgrounds and tend to be intermediate to advanced low speakers of English on ACTFL's Oral Proficiency of English scale.

Tip #1: Use a broad definition of pronunciation

Segmentals, or the individual sounds of a language, and suprasegmentals, which include stress and intonation, are two main features often associated with pronunciation. However, since an increasing amount of research demonstrates the connection between gesture and clear speech (Goldin-Meadow & Alibali, 2013; Guidetti & Nicoladis, 2008; Smotrova, 2015), instructors should consider broadening their conceptualization of pronunciation to one that includes gesture. In fact, such a framework is provided by Fraser (2001), who describes pronunciation in terms of three key categories: segmentals, suprasegmentals, and peripheral features, such as gesture and other body language. As demonstrated below, instructional activities that involve mirroring videos of winning 3MT presentations will naturally lead to the incorporation of each of these three categories.

Teaching Tip #2: Have students mirror the prosody of high quality models

Mirroring, defined here as shadowing not only the voice characteristics but "the whole bodily action" of the model (Kjellin, 1999, p. 7), has been shown to improve student learning. Designing a mirroring project begins with the selection of videos clips for students to first analyze (for all aspects of pronunciation, as broadly defined above) and then mirror (i.e. reproduce in a performance that mirrors the original speaker as closely as possible). As noted above, winning presentations from the 3-Minute Thesis (3MT®) competition can be an appropriate choice in many academic settings. In addition to being tasked with explaining their research in a way that will interest and engage the audience, 3MT presenters are only allowed to use one static slide so the emphasis is on effective delivery of the spoken word, rather than on visuals. Of course, practitioners in other settings can choose models based on what is most fitting for their contexts. With appropriate models on hand, the next step is to provide students with a structured method for analyzing the speaker's pronunciation. The Prosody Pyramid (Figure 1), provided by Gilbert (2018) and building upon the work by additional scholars, can serve well for this purpose. As can be seen in the figure, a thought group, sometimes also referred to as message unit or breath group, is a series of words linked together with pauses at either end. Within a thought group, the word that receives the most prominence is the focus word, also known as the nucleus, main stress or tonic accent; the default placement of this focus is the last content word in the thought group (Reed & Levis, 2015).
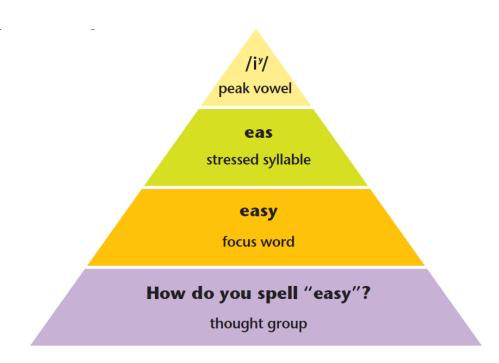
Figure 1. Prosody pyramid (Gilbert, 2014, p. 127).

Within the focus word is the primary stressed syllable, with the vowel in this syllable as the peak of the pyramid.

The concepts above can be practiced in the classroom through working with a 3MT, which is chosen by students based on their interests or by the instructor based on the 3MT's suitability for a particular class. Students listen to a section (no longer than one minute) of the 3MT video (rather than the full three minutes which may prove too time-consuming) and mark a transcript of it for thought groups, focus words, and the stressed "peak" syllables in any multisyllabic focus words. For instance, a student might identify that the phrase "and in our analysis" was linked together, in other words, spoken as one thought group, that the word "analysis" received focus (prominence) from the 3MT speaker, and that the /æ/ sound in the second syllable of "analysis" is the peak vowel. Although the prosody pyramid shows only focuses on the most prominent word in a thought group and its corresponding peak vowel, recent research by Cauldwell shows that in spontaneous speech, about 40% of thought groups have one focus word while an additional 40% of thought groups have two (Murphy, 2017). Applying this concept to the prosody pyramid above, in the thought group */ how do you spell easy /,* "easy" is the strongest focus word and contains the peak vowel but "how" could also receive some focus, leading to a smaller additional peak toward the beginning of the thought group. Although 3MT presentations are not spontaneous speech, this 2-peak pattern appears in many cases, and in the course of analyzing transcripts, students notice the many thought groups that have this two focus word profile.

The sample below shows what a student's analyzed transcript might look like after their initial analysis of thought groups, focus words, and syllable stress within focus words. Thought groups are indicated by the / marks; focus words are marked in bold (students can circle them, highlight

them or underline them depending on their preference); the stressed syllables of any multi-syllabic focus words are underlined; peak vowels are written in upper case.

Sample of an analyzed transcript

close your eyes for **tEn** seconds / and **think** about what a **rAInforest** means to you / if you're

like **mE**, / it means **wIld** animals / and **trOpical** plants /**bUt**/ to the **indIgenous** people I

wOrk with / these **forests** mean **fOOd**

Excerpt from Olivia's Sylvester 3MT presentation (University of Manitoba, 2014)

Figure 2. Sample analyzed transcript.

Using their marked transcripts, students can begin to imitate the pausing and intonation patterns of the original speaker. Depending on student level and instructor goals, elements of linking (**think**_about) and reduction (**wild** animals 'n **tropical** plants) can also be analyzed and imitated. (For an even more detailed description on how to introduce even more analysis and mirroring into your classroom, see teaching tips 5-8 below.) As students analyze their videos and begin to "mirror" the original speaker, they will undoubtedly notice the peripheral features, specifically the gestures, that accompany focus words. In the case of the above excerpt from a 3MT presentation speaker, for instance, the thought group /if you're like me/ is accompanied with hand movement toward the chest, and in the grouping /these forests mean food/, the speaker points behind her to a picture of the forest. The prevalence of such gestures in effective presentations leads to the next tip.

Teaching Tip #3: Explicitly teach gesture

When mirroring, the salient connection between gesture and focus can lead students to a greater understanding and appreciation for clear delivery. For instance, when mirroring an original speaker producing the thought groups */on the **one** hand/* and */on the **other** hand/,* the use of the hand gesture on the focus words **one** and **other** often helps them deliver these words in the conventional manner. To aid students in their use of gesture, instructors can explicitly teach the three categories of gesture below: representation gestures, pointing gestures, and beat gestures.

1. Representation gestures

   Sometimes referred to as "representational" gestures, this category includes any gesture that represents the word, such as gesturing toward yourself for "my," making an upward motion with one or both hands for "increase," or bringing the hands together for the word "collaborate." Although representation gestures can be further broken down into iconic from metaphoric gestures, grouping them into one category suffices in the classroom.

2. Pointing gestures

As the name suggests, these gestures involve pointing at or toward a visual, gesturing toward a particular person ("I'd now like to welcome Dean Tedesco") or pointing in a particular direction ("This research is happening right next door").

3. Beat gestures

Beat gestures refer to hand movements that are not representation or pointing gestures, but instead have the sole purpose of keeping the rhythm. Using a gesture to accompany the peak vowel of a focus word can help speakers produce it with the length and clarity that is expected. For instance, one of the students was mirroring a 3MT presentation that included the sentence "You can see both quantum and relativistic properties at work" (University of Waterloo, 2013), with the focus being on the words "quantum" and "relativistic." The student was having difficulty with production of the focus words, especially the five-syllable word "relativistic," until he added in the original speakers beat gestures (holding up one hand on the peak vowel in **quAntum** and then holding up the opposite hand as he produced the peak vowel in **relativIsti**c). Although anecdotal, such observations are in line with studies on the role of gesture and effective speech (Goldin-Meadow & Alibali, 2013).

After showing students examples of these gesture types, they can add notations to their analyzed 3MT transcript. For instance, they might write "bring hands together" over the word "join" or "point with thumb over shoulder" over the words "in this image." From this point on, when students practice mirroring with their marked transcripts, in class with a partner or at home on their own, they can try to produce focus words together with their corresponding gestures. The vast majority of students, even those who perhaps do not gesture much in their first language, feel quite comfortable incorporating the original speaker's gestures into their mirroring performances. In fact, the act of mirroring is a way for them to "try on" a different way of speaking by imitating a highly intelligible, winning presenter. If the original speaker, however, has a frequency of beat gestures that a student finds hard or awkward to imitate, of course they can choose to simply focus on the representation and pointing gestures, the ones that are perhaps a bit easier to reproduce.

Background on Tips 4-8

These activities are designed for intermediate students in an IEP (Intensive English Program). At first, the whole class works together and analyzes and mirrors one 3MT presentation (Tip #4-7). After that, students follow the same steps and each student works on different 3MT presentations, similar to the mirroring project described above. Finally, each student prepares a poster presentation using a 3MT presentation of their choice (Tip #8).

Teaching Tip #4: Watch a 3MT video without sound and analyze and mirror gestures (whole class activity)

To raise awareness of body language, watch one 3MT video clip selected by the teacher, with the sound muted. To begin, students watch the first 40-45 seconds of the muted 3MT video and guess the words that accompany the gestures. After watching the silent video a few times, students can

guess words like "me," "first," and "second," and can also easily recognize phrases, such as "on the one hand," "on the other hand," and "led to a rise in," simply by interpreting the gestures. Students can then reproduce the clip without sound, practicing and video recording themselves with their smartphones.

Teaching Tip #5: Provide a transcript with punctuation and capitalization removed; mark up the transcript (whole class activity)

To raise awareness of the use of pauses at the boundaries of thought groups, provide a transcript of the selected 3MT presentation without capitalization, commas, and periods and ask the students to mark any pause they hear (Murphy, 2017). Students generally have no trouble indicating the thought group boundaries. This activity helps draw attention to the importance of pausing, and students benefit from incorporating appropriate pausing in their speech because it can lessen the load of the listener and give them time to process speech that might otherwise be challenging to understand. For many NNS student, it is difficult to avoid pausing until the end of a thought group, and this inappropriate pausing within thought groups can cause confusion for the listener.

The next step is to listen and mark focus words, and again, students are generally able to recognize the focus words. Indeed, in many cases, the students have already noted some of these focus words because the 3MT speakers often use gestures to highlight important words (see Tip #4). Students also notice that many of the thought groups have two focus words and that the second word is the strongest (see Tip #2), and mirroring these thought groups helps students produce the multiple peaks and valleys pointed out by Dickerson (2016) in his two-peak model.

After agreeing as a class on the focus words, students are ready to mark intonation using arrows or curved lines. While focusing on the peaks and valleys of intonation, it is important to raise the students' awareness of how native speakers' intonation involves contrasting high and low intonation, and that intonation often falls before it goes back up on a focus word. Although a monotone voice may be intelligible, intonation affects how we perceive other people and how we are perceived. In fact, research at Georgia State University (Clower & Lindeman, 2016), in which undergraduates listened to recordings of the same speakers speaking once in monotone and once with native-like intonation, found that monotone speakers, both native and non-native, were judged as unfriendly, unintelligent, and ineffective while the speakers with appropriate intonation were judged much more favorably.

Teaching Tip #6: Practice in chorus to learn prosody (whole class activity)

Once the transcript is marked up, the teacher leads the students in a chorus practice imitating the original 3MT. Kjellin (1999) promotes chorus practice and intense repetition as a way for language learners to learn prosody, including stress, intonation and rhythm. Just like singing in a chorus, speaking in chorus can help the voice, and subsequently the brain, to acquire the sounds of the new language.

Teaching Tip #7: Students video record themselves mirroring the model 3MT speaker (individual homework assignment)

After analyzing and practicing the sample 3MT together as a whole class, for homework, each student records a video of themselves mirroring about 45-50 seconds of the 3MT presentation. Students seem to put in the most effort in practice when they make videos of themselves, especially if they know that they will have the opportunity to share the videos in class. In fact, most students seem to make more effort when producing a video of themselves than they do preparing for a live presentation of the same material, so this tip can be a powerful tool to encourage sustained practice with intonation.

Teaching Tip #8: Prepare a poster presentation to teach pronunciation using a 3MT (individual project)

Now students are ready to prepare for a poster presentation. The instructor provides transcripts (without punctuation or capitalization, as noted in Tip #5) of the first 45-50 seconds of several 3MTs, choosing models suitable for students' proficiency level, also supplying links to the 3MT videos. Samples include both male and female 3MT speakers and also highly intelligible NNS speaker models, ideally of native speakers from the language backgrounds represented in the class. Examples of accented, NNS communicating effectively can serve as "aspirational models" (Murphy, 2014) so students should be encouraged to use such models.

Next, students follow the steps they learned in the whole-class exercise described above (Tips #4-7). After they mark up the transcript, they mirror the original speaker's pronunciation and gestures, practicing both in class and for homework. After students have learned to mirror the body language and pronunciation of the 3MT speaker they chose, they prepare to give a poster presentation in which they will teach other students to mirror the presentation. During the poster presentation, students will also teach 2-3 consonant or vowel sounds, choosing the segmentals that they themselves find challenging. In a class with students from different language backgrounds, there will be a wide variety of challenging sounds. For example, a Vietnamese student might focus on consonant clusters, while a Japanese student might focus on /l/ and /r/. In a homogenous class, the students might all focus on similar segmentals, but each poster presentation is based on a different 3MT transcript, so for each presentation the sounds will be taught in a different context.

Finally, each student's poster includes the analyzed portion of the 3MT transcript, marked up with pauses, focus words, and intonation, and also 2-3 specific challenging sounds the student has chosen to teach. Students also illustrate on their posters how the specific consonant or vowel sounds are articulated by drawing images of the mouth and lips. During the poster presentations, each student (1) presents their 3MT, mirroring the body language and the pronunciation of the original speaker; (2) teaches the other students to mirror the 3MT in chorus (teaching gestures, focus and intonation); and (3) teaches sounds that the student finds challenging. Since the format is a poster presentation, each student has the opportunity to present 2-3 times and each presentation takes 4-5 minutes. The other students act as the audience and move around to the 2-3 posters in the room.

The 3MT project described above spans about three weeks from beginning to end. Over several semesters, students have been consistently enthusiastic and engaged throughout this project, and they clearly improve their use of focus words, intonation, and use of gestures in the context of these activities. Since many NNS students often find the stress and intonation patterns of English difficult to acquire and the use of body language awkward, mirroring a model speaker, especially one from their own language background and performing as that speaker, helps lessen the awkwardness. The imitation of the original 3MT speakers is instructive, and another powerful aspect of the project is the students teaching their classmates to mirror the body language and speech patterns of their chosen 3MT speaker. As teachers know, nothing helps learning something as much as having to teach it does. Many students have also shared in their written feedback that the 3MT mirroring project has helped them communicate more clearly beyond the classroom.

CONCLUSION

The teaching tips above are informed by current best practices and center around students' analysis and reproduction of authentic speech using winning 3MT presentations as models. Through analyzing and mirroring the prosody of either NSs or highly intelligible NNSs, students have ample opportunities to practice all aspects of speech, including linking, pausing, syllable stress, prominence, intonation, and gesture. These activities not only raise students' awareness of the prosodic system but also encourage the type of quality repetition that "helps students feel themselves growing in mastery" (Gilbert, 2014, p. 128). As suggested in Tip 8, these mirroring activities can be expanded to include students' teaching each other not only the suprasegmental but also the segmental aspects of the model speaker's 3MT. Students who have engaged in the activities outlined here have consistently reported feeling more confident and more able to communicate effectively, not only in presentations but in other spoken exchanges as well.

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