Using the SATPAC Program and Approach to Remediate Speech Sound Disorders Part 2

Remediation of /r/ and other common error sounds

RESOURCE HANDBOOK

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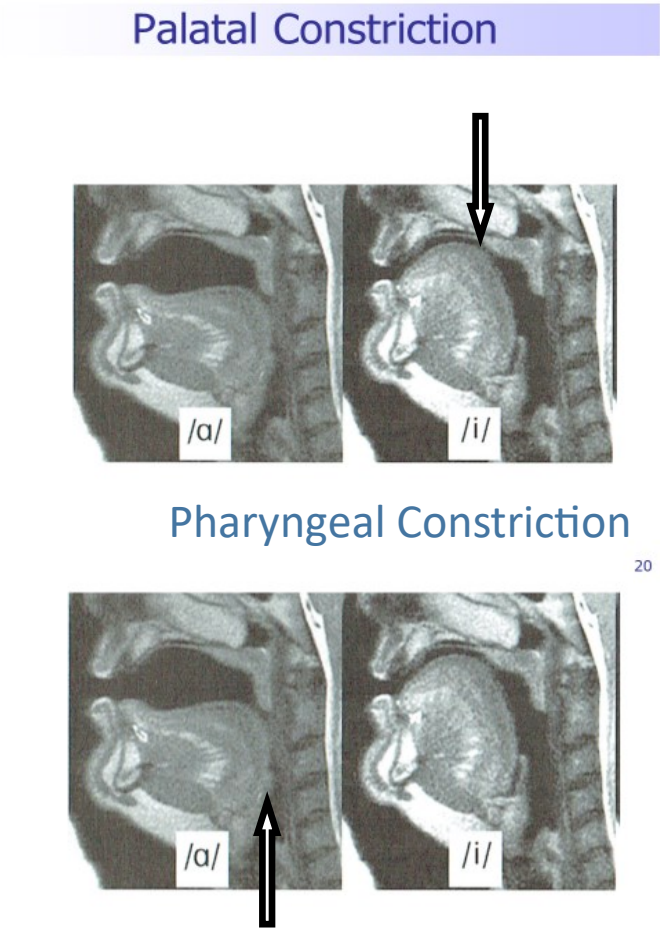
SATPAC Speech
Professional Workshop Series

www.satpac.com

Multimodality Approach to /r/ Remediation

There needs to be 2 types of constriction in order to make a correct /r/ sound . There is palatal constriction and pharyngeal constriction. Some experts also mention there is a third type of constriction at the lips.



Research using MRI images by Suzanne Boyce in Secord, Boyce, Donohue, Fox and Shine's book, *Eliciting Sounds,* shows that to make a correct /r/ sound, there also needs to be pharyngeal constriction!

The MRI of the /ɑ/ (p. 146 Secord et al.) shows excellent pharyngeal constriction as you can see that that the root of the tongue is closing off the pharyngeal area. With the /i/ sound as you can see in the right image, you get a high arched dorsum. You also get a wide tongue with the lateral margins on the back molars leading to excellent palatal constriction. According to Boyce, the vocal tract is narrowed by the blade plus a part of the dorsum. But with /i/, there is no pharyngeal constriction as you can see how open the pharyngeal area is.

Having taught /r/ successfully for years and having no knowledge of pharyngeal constriction, it occurred to me that the success of the facilitating contexts EERGA, EERSHA and EERDA (which I use) has to do with coarticulation. The student is anticipating moving into the /æ/ which is very close to the /ɑ/ pictured here and thus achieves pharyngeal constriction. In fact, Boyce pointed out to me that this is probably the case from the evidence in her chapter that the /ɑ/ probably shapes pharyngeal constriction.

Step	Feedback Modality
1. Modeling Correct/Incorrect "EER	**Auditory, Visual Feedback w/mirror/flashlight/ observation**

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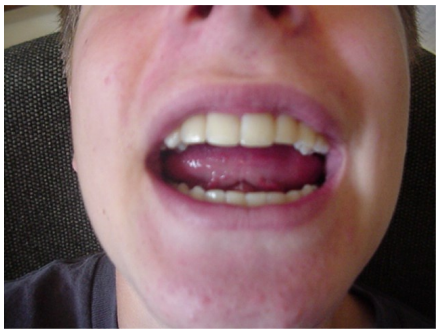
For the /r/ sound, I begin by asking the student to say "EER". Invariably, the response is "EEO" (O as in BOUGHT). They are usually not stimulable and do not have a facilitating context. They typically will drop the jaw, tongue and round the lips (they use the orbicularis-oris muscles which should not be used at this point). These are significant indicators because an important goal of saying "EER" correctly is to separate the tongue movement from the lips and jaw. Generally when "EER" is said correctly, only the tongue moves while the lips and jaw are stationary.

I begin using the visual modality right away modeling correct and incorrect tongue placement. I demonstrate the correct "EER" and mimic the student's "EER" and ask the student to tell me what is different between the two. I tell the student to watch my tongue, particularly the sides of my tongue and see what is different. Usually they can see and describe that the sides of my tongue stay up on my top teeth while theirs drop down. This is the metacognitive piece that the student uses to understand what they are doing and how to make the correct sound and when they make an error, how to correct it.

Step	**Feedback Modality**
2. Tongue /pull back/push-ups	**Visual w/ mirror**
	Tactile w/applicator stick

This is a 3 step process that quickly morphs into 2 steps. First is open your mouth. Second is say EE with your mouth open which will widen the tongue. Third is to get in R position which at this point is the mouth about 1/3 open (or the place where your mouth is biting an infant tongue depressor with the front teeth (see the position below with and without the tongue depressor).



Then the 2 steps occur with the directions:

OPEN, EE OPEN, EE

At this point we work on getting the tongue pulled back and wide. We do what I call tongue push-ups. The student using a mirror and flashlight, opens the mouth wide, pulls the tongue back as far as he can into itself so the tip isn't visible and then closes to 1/3 open and says "EE" pushing up on the top teeth with the sides of the tongue. If the student has difficulty pulling the tongue back, touching the side of the tongue near the back with an applicator stick usually works. If still unsuccessful, oral-motor techniques such as sipping pudding through a straw or blowing horns as described by Sara Rosenfeld-Johnson (Talk Tools) will do the trick. The sides of the tongue should be pushed up against the back molars. These steps are all visible to the student when using a mirror and flashlight.

The purpose is to develop a consistent jaw grading where the student will put the jaw consistently in this 1/3 open position with the tongue wide touching the back molars. Certain students when asked to do this exercise are very inconsistent where they end up when asked to close their mouth 1/3 open. For them, we need to work on developing consistent jaw grading.

Step	Feedback Modality
3. Jaw Grading	Visual/ Proprioceptive w/mirror
	Proprioceptive

A frequent problem is that the student is unable to grade the jaw appropriately and stop 1/3 open. For these students, we practice jaw grading. Using a scale of one to four, one has the teeth closed in a normal bite, two has the teeth slightly open (biting a flat tongue depressor) while three has the mouth open about 1/3 (with the tongue depressor turned vertically and four has the mouth all the way open. . We practice different sequences until the student can easily stop at each number.

Position 1

Position 2

Position 3

Position 4

While looking in a mirror, the student follows the position that the SLP calls out (for example): 1,3,2,4,2,3, etc. What you will typically see with these kids is overshooting and undershooting as they attempt to get into the proper position. However, with some practice, they start developing consistency. I have them do this exercise at home where they follow different number patterns, look in the mirror and place the jaw in the correct position.

We then work on jaw grading with the eyes closed so they get the feeling of proprioceptive feedback of where their jaw is in space. They can then check their jaw position to see if it is correct. Finally, the mirror is taken away and the student has to rely on proprioceptive feedback.

Step **Feedback Modality**

4. "EE EE EERGA" w/Jaw Stabilization Visual/Auditory/Tactile-Kinesthetic w/mirror, flashlight and tongue depressor

After they can competently move their jaw into the four positions without visual feedback, they are ready to attempt EERGA (as are the students who had no jaw grading difficulties). I use a facilitating context like EERGA, EERSHA, EERNA or EERDA depending upon the shape of their palate and which one they can say most correctly. I'll use EERGA in this explanation. They keep the mouth approx. 1/3 open and say "EE, EE, EERGA". If there is any jaw movement (and there typically is), I have them bite on 3 infant tongue depressors on the side of their mouth to keep their jaw stable. If they still drop the sides of the tongue on "EERGA" (which is usually the case), I use an infant tongue depressor to assist them. Placing one hand behind their neck for stability (or holding the push stick with one hand and pulling on the 3 sticks with the other, I place the stick laterally under their tongue. I tell them to keep their bottom lip in a tight smile and keep their mouth still. When they say "EE, EE", the stick stays still. When they say "EERGA", I push back (but not too far back) under the tongue. Notice that the tongue is elevated on the stick which helps the student achieve palatal constriction. About 80% of the time the student will say a correct "EERGA" and with repeated trials I will almost always get a good /r/ sound in the first session. A mistake I often see is that the students feel that they have to pull the tongue way back to get the correct /r/ sound while the reality is the opposite. It is just a slight backward movement with the stick primarily assisting the sides to stay up on the top teeth (although the exact point may differ with the individual). A mirror and flashlight may be used so the student can see the wide tongue and the elevated dorsum for palatal constriction.

Perhaps 20-50 repetitions are needed before the student can take the stick under the tongue and do this exercise independently. I allow for visual feedback if needed using a mirror and a flashlight (which I hold). At this point, it becomes very individualized. Some students "get it" and can proceed without the sticks. Others need to use the sticks for a week or two before being ready to move on and it is not unusual to be using the sticks for a month or two while going through the Practice Phase lists. Many repetitions are very important. I have my students do sets of 50-100 and daily practice of 50-100 at home. Tactile-kinesthetic feedback is important here as the mirror and flashlight are removed and I ask my students to occasionally close their eyes and feel what they are doing as they make the correct /r/ sound.

Step	Feedback Modality
5. "EER" or "EER"+ FC	**Auditory/Tactile-Kinesthetic**

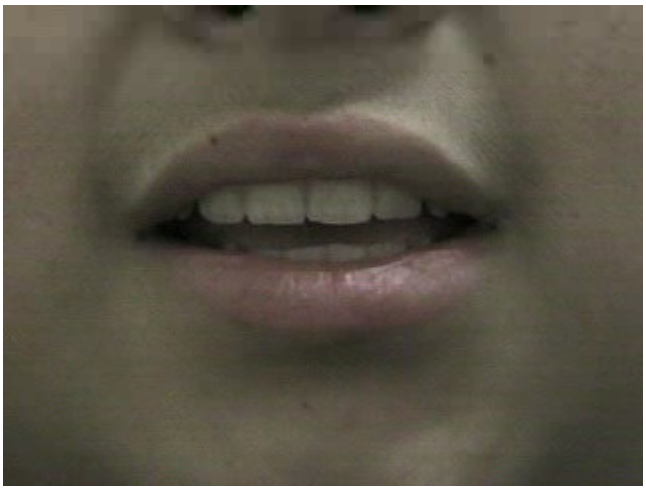
Before I used facilitating contexts, I had much more difficulty. In the picture on the left, the student is attempting to say EER. Note how the back of the back sides of tongue are dropped off the back teeth and the dorsum is down. On the right, he is saying EERGA. With the facilitating context GA, he keeps the back sides of his tongue wide on the back molars and anticipating saying the /g/ sound, he keeps his dorsum elevated.

Often a facilitating context (FC) helps the student say the /r/ correctly. I've found that adding NA, DA, SHA or GA to the EER, typically improves the production. Because each student is different, different FCs work with different students. Some students are more successful making the /r/ sound more in the front so EERNA or EERDA works for them. Others make the sound more mid-back so EERSHA works for them. Some will make the /r/ further back and EERGA works for them.

Step	Feedback Modality
6.Jaw Stabilization for Lateral Jaw	**Auditory/Tactile-Kinesthetic**
Movement	w/an infant tongue depressor

I had a group of /r/ students who were not making much progress and after I took some O-M classes, I watched them carefully and they all had issues with jaw stability either side to side issues or inconsistency with jaw grading.

For the more difficult /r/ cases, I will have the student use an infant tongue depressor between the top and bottom teeth (see the next page). This technique also is valuable because it keeps the mouth open with the correct jaw position. Often students will attempt to say /r/ with the mouth closed too much.

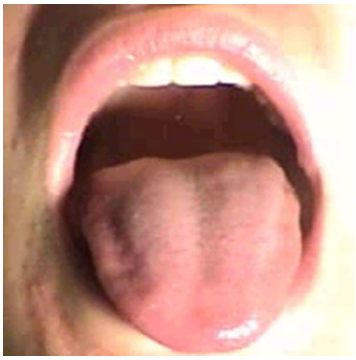


This student's jaw drifted to the left as he continued to practice /r/. Notice in the first picture how the spaces between the top two front teeth and the the bottom two front teeth do not line up because he was pulling his jaw to the left side.

To keep his jaw stable, I had him use an infant tongue depressor between his top and bottom front teeth so they lined up correctly.

When he pulled his jaw to the left, the stick turned and dropped giving him good feedback that he moved his jaw.

Once the student can say “EER”, the mistake I most frequently see is they don’t keep the dorsum area high enough. The result is that a clear /r/ sound does not come out. Using a mirror and flashlight for visual feedback, an applicator stick tip is placed midline where the hard palate and soft palate meet. The student is instructed to touch the cotton point of the stick with the dorsum area and say “EER”. Most often, the student will not get the tongue high enough to touch but the attempt keeping the tongue higher results in a successful /r/ sound.



An exercise to develop keeping the dorsum area up is the following: Begin by sticking the tongue out all the way and give the direction to “squeeze your tongue to make it bunchy”. From there with tactile stimulation rubbing on the dorsum area with an applicator stick if necessary, the student arches up the dorsum area. Then pulling it back inside the mouth, they attempt to scrape the palate moving back and forth.

A second issue is the tongue comes off the back molars and the palatal constriction is gone. I keep stressing a “big smile” which helps keep the tongue wide which aids palatal constriction.

While this progress is happening, I focus on more consistent responses through mirroring their responses. Every time they make an incorrect “EER” sound, I give them immediate auditory feedback: “EEA”? Eventually, they listen more closely to their responses and will self-correct. At times, I have my students use a Radio Shack (or other) mini audio amplifier to increase the volume and clarity of the auditory feedback. A cheaper alternative is to use a mic app on a smart phone.

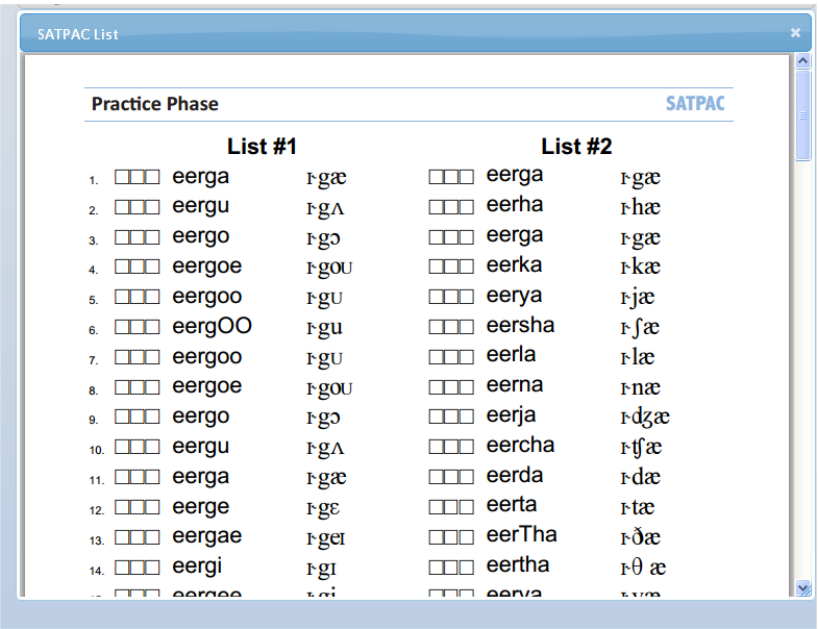
When the student is making consistent /r/ sounds, I find a facilitating context using coarticulation (e.g., EERGA) and eventually proceed into the SATPAC Program. Using nonwords (e.g., EERGA, EERSHA or EERNA, EERDA) through the Establishment Phase, Practice Phase of 6 lists. Finally the sound is transferred into phrases, sentences and real activities.

8 Stick Hierarchy

Using the infant tongue depressors usually progresses in the following order: 1) SLP holding jaw stabilization stick(s) - “bite” plus tongue stabilization stick – “push”; 2) Student holding bite and push sticks; 3) Push stick only; 4) Bite sticks only; 5) No sticks.

List Structure and Potential Issues

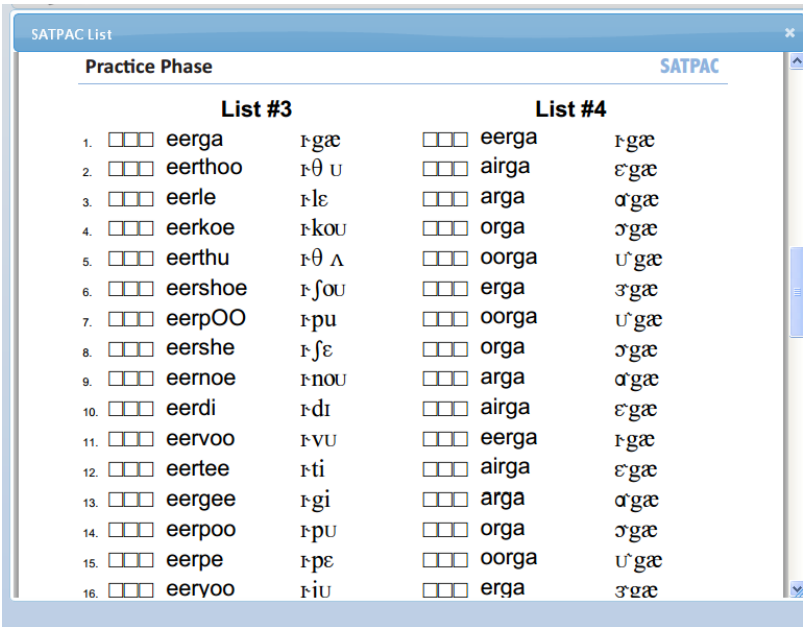
Practice Phase-Lists 1 and 2


SATPAC List

Practice Phase SATPAC

	List #1		List #2	
1.	□□□ eerga	ɪgæ	□□□ eerga	ɪgæ
2.	□□□ eergu	ɪgʌ	□□□ eerha	ɪhæ
3.	□□□ eergo	ɪgɔ	□□□ eerga	ɪgæ
4.	□□□ eergoe	ɪgoʊ	□□□ eerka	ɪkæ
5.	□□□ eergoo	ɪgʊ	□□□ eerya	ɪjæ
6.	□□□ eergOO	ɪgu	□□□ eersha	ɪʃæ
7.	□□□ eergoo	ɪgʊ	□□□ eerla	ɪlæ
8.	□□□ eergoe	ɪgoʊ	□□□ eerna	ɪnæ
9.	□□□ eergo	ɪgɔ	□□□ eerja	ɪʤæ
10.	□□□ eergu	ɪgʌ	□□□ eercha	ɪʧæ
11.	□□□ eerga	ɪgæ	□□□ eerda	ɪdæ
12.	□□□ eerge	ɪgɛ	□□□ eerta	ɪtæ
13.	□□□ eergae	ɪgeɪ	□□□ eerTha	ɪðæ
14.	□□□ eergi	ɪgɪ	□□□ eertha	ɪθ æ

Practice Phase-Lists 3 and 4


SATPAC List

Practice Phase SATPAC

	List #3		List #4	
1.	□□□ eerga	ɪgæ	□□□ eerga	ɪgæ
2.	□□□ eerthoo	ɪθ ʊ	□□□ airga	ɛˠgæ
3.	□□□ eerle	ɪlɛ	□□□ arga	ɑˠgæ
4.	□□□ eerkoe	ɪkoʊ	□□□ orga	ɔˠgæ
5.	□□□ eerthu	ɪθ ʌ	□□□ oorga	ʊˠgæ
6.	□□□ eershoe	ɪʃoʊ	□□□ erga	ɜˠgæ
7.	□□□ eerpOO	ɪpu	□□□ oorga	ʊˠgæ
8.	□□□ eershe	ɪʃɛ	□□□ orga	ɔˠgæ
9.	□□□ eernoe	ɪnoʊ	□□□ arga	ɑˠgæ
10.	□□□ eerdi	ɪdɪ	□□□ airga	ɛˠgæ
11.	□□□ eervoo	ɪvʊ	□□□ eerga	ɪgæ
12.	□□□ eertee	ɪti	□□□ airga	ɛˠgæ
13.	□□□ eergee	ɪgi	□□□ arga	ɑˠgæ
14.	□□□ eerpoo	ɪpʊ	□□□ orga	ɔˠgæ
15.	□□□ eerpe	ɪpɛ	□□□ oorga	ʊˠgæ
16.	□□□ eeryoo	ɪiʊ	□□□ erga	ɜˠgæ

List 1 has EERG__ in each word with the various vowel sounds.

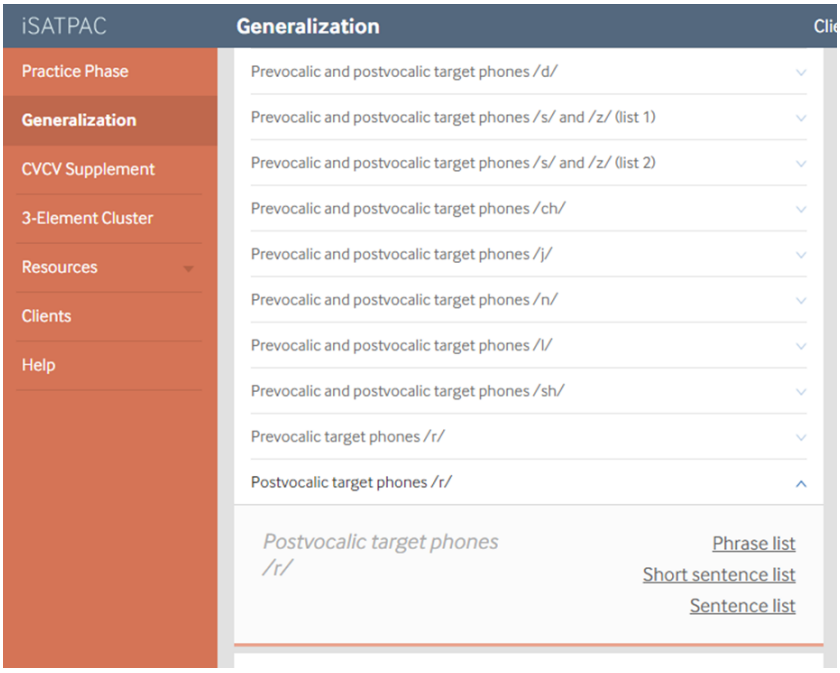
List 2 has the EER___ abutting against every consonant sound with the /æ/ sound at the end.

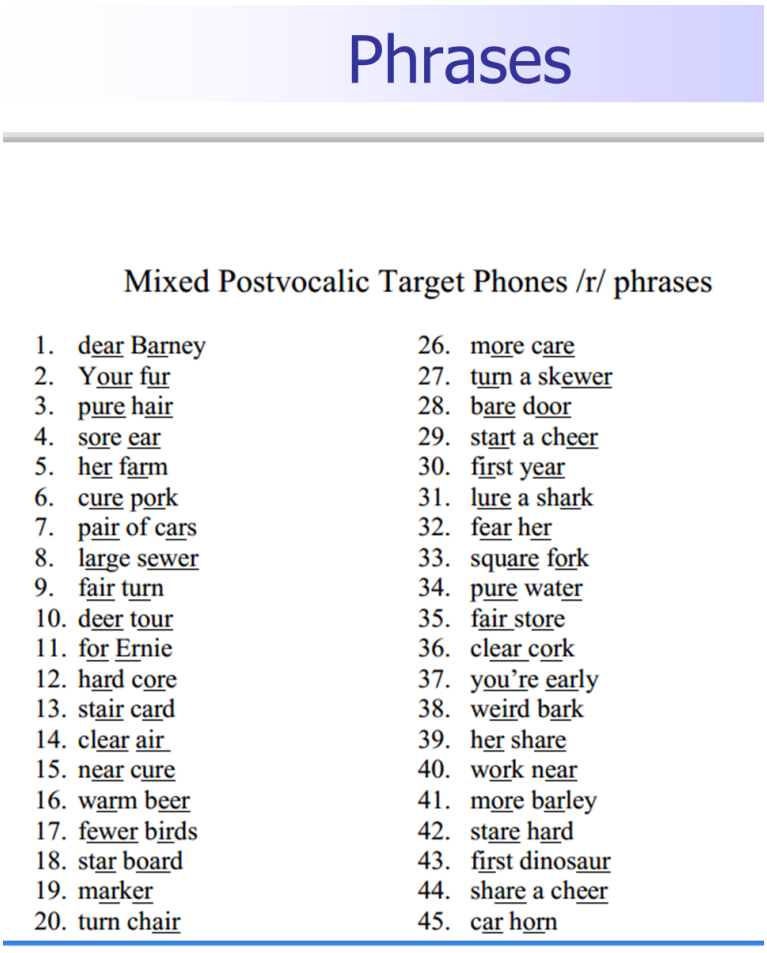
The reason that EER is said in each word is that that is the best context for getting good palatal constriction and the EE keeps the tongue wide against the back molars.

List 3 has EER + random consonant and vowel sounds.

List 4 moves away from the exclusive EER and now the student is saying the postvocalic /r/ in various contexts.

It is not unusual at this point for problems to develop, particularly with the OR and OOR. What tends to happen is that the student will round the lips and the tongue will get lax and not stay wide against the back molars so the palatal constriction is lost. I stress that the student needs to get back in the big smile on ER after rounding the lips on O which will get the tongue wide again and keep the palatal constricition.





For the Generalization/Transfer Phase, we have chosen to work with the postvocalic /r/ phrases and sentences.

It is not unusual to have difficulty when beginning the phrases. Even though you have practiced lots and lots of various contexts, students still may approach these words using their old way of pronunciation. For example, DEAR BARNEY might be said as DEE-A BA-NEE,etc.

What I do if that's the case is go back to adding the facilitating context in the case GA. So the first phrase would be DEARGA, BARGA with GA after each /r/ sound. We practice that keeping the big smile on the EER to promote keeping the tongue wide on the back molars to retain palatal constriction. When the student is doing well with this, I will have them say the lists in the same manner but whisper the GA. When they are doing well, I say to just whisper a short /g/ sound. And finally, I tell them to pretend they are say GA but they don't say it.

This may take some time (weeks/months) but my experience is that everyone eventually will get it.

Short Mixed Postvocalic Target Phones /r/ Sentences

1. Did you hear about her?
2. Her dog has purple eyes.
3. She works near home.
4. The horse cart fell.
5. She went farther away.
6. A dinosaur was born.
7. Star Wars is a fun movie.
8. I wore dark pants.
9. Her dog likes to bark.
10. The car door opened.
11. Purple hair is cool.
12. The paper was for me..
13. The cheerleaders laughed.
14. Tom ordered milk and cookies.

We continue with short sentences then longer sentences if age appropriate. Often during the sentences, the student is consistently using the motor skill of keeping the sides of the tongue against the back molars. At this point, you can show them that when you say an /r/ word, you don't use a big smile and that they don't need to do it anymore. Also, at this point I will bring in the prevocalic /r/ have the student say ERRAT over and over, keeping the lips in a slightly rounded position and when this becomes easy, doing a list of prevocalic words and eventually shortening the ER so the words sound more natural. There are also SATPAC lists which combine the pre/postvocalic words .

Mixed Postvocalic Target Phones /r/ sentences

1. Did you hear about her arm?
2. Her dog has purple fur.
3. She works near the furnace.
4. The horse cart turned.
5. The store was farther away.
6. The first dinosaur was born.
7. Star Wars is here.
8. I wore a dark silver ear pin.
9. Her dog had a clear bark.
10. The car door hurt my finger.
11. Purple hair is weird.
12. The paper was for Verna.
13. The cheerleaders started a cheer.
14. Ernie ordered a warm beer.
15. You're early, Barb.
16. We need more clear water.

Position of Lips for Normal /r/

It should be noted that for the posvocalic /r/, I'm teaching a big smile to make sure that the sides of tongue are touching the back molars.

This is an intermediate step!

The final correct /r/ position is with the lips rounded or in a resting position.

Prevocalic and Postvocalic Target Phones
/r/ sentences - List 1

1. The girl ran.
2. Rich wore new socks.
3. I crashed my new car.
4. The rabbit was eating corn.
5. Mr. Smith was on the radio.
6. The grease fire went out.
7. My brother jumped.
8. Mark ran out.
9. Randy had a sore leg.
10. I prefer plastic.
11. Turn on the radio.
12. My computer was broken.
13. Bernie likes to rap.
14. Don't forget the rug.
15. Rocky likes the carnival.

From here, we move into reading and conversation. When the student is near 75% accurate in conversation for a couple of weeks, I will dismiss from formal therapy but will do stability checks after a month to make sure that there is no regression. I will also ask my students to use the tally counter and do 100 good /r/s a day with reading and/or conversation. Typically, I will see improvement when I recheck. However, if they have significantly regressed, they are put back into therapy.

If they are maintaining their progress after a month, I will then check in 3 months and if they have still maintained their progress, they are formally dismissed.

One thing I have ignored talking about that is critical in our profession is relationship. Kids can quickly pick up if we don't like them or if we don't really care about what we are doing. I remember as an undergraduate that an experienced SLP spoke to our 1 unit class about various aspects of our profession and she said that we were going to be dealing with snot-nosed kids who might not treat us well but we have to treat them with dignity and respect. In my career, this was always a focus of my therapy and I found for the most part that discipline was not an issue with the kids I worked with—even those who terrorized other teachers and kids.

I always tried to impart that what they were working on was really important, it was going to make their lives better. When it was hard for them to do what I asked, I acknowledged that and told them that with practice, they were going to get it. And each step of the way, as they improved, it was important to share that with them.

A Different Strategy for R Remediation

I spend a lot of time working with the student using a big smile to promote a wide tongue pressed up on the back molars to get palatal constriction. Toward the end of therapy, I make the point that it is not necessary to smile anymore and the natural position of the lips is rounded, and protruded with the mouth about 1/3 open to get the correct ER position.

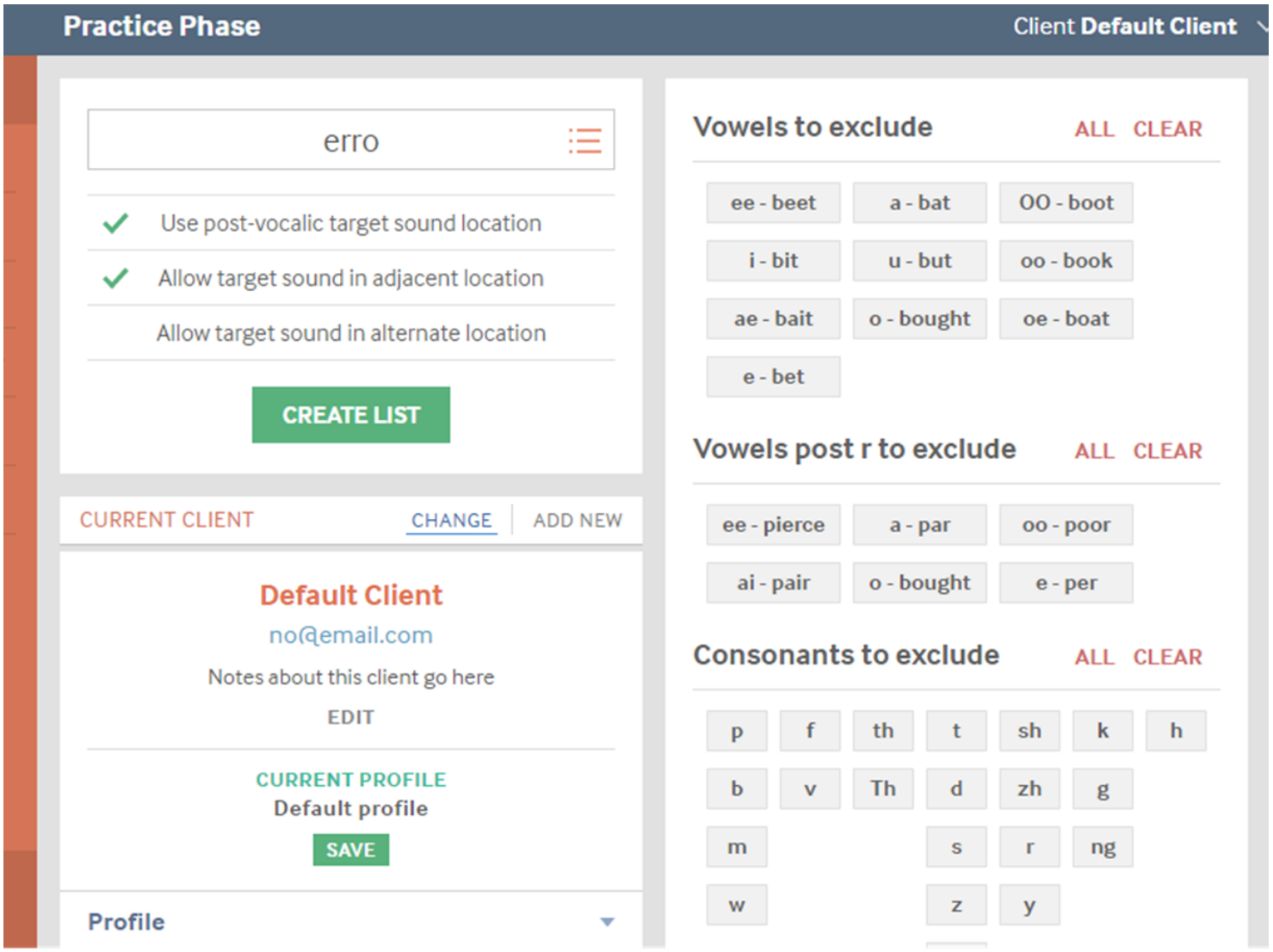
Thinking about speeding up the process: What if I can get the correct rounded lip position with the stabilized tongue on the back molars from the beginning?

O-M technique -- Sipping pudding through a straw

Straw is in a vertical position bent at the top and held in the lips only (not the teeth).

When sipping pudding (or yoghurt or other thick semi-liquid), the tongue pushes hard and up on the back molars and retracts which is what you want for the /r/ sound.

Using the SATPAC Program



As you can see, the facilitating context word is ERRO. We are using the ER sound with rounded lips to get /r/ in the postvocalic position. We are using RO with the lips remaining rounded to get the /r/ sound in the prevocalic position . The rationale for using the O sound is due to it being a facilitating sound for pharyngeal constriction. Meanwhile, coarticulation comes into play as the student anticipates the upcoming O sound and pharyngeal constriction begins to take place which is necessary for /r/ production.

Note that there is a check mark by *Use post-vocalic target sound* so the ERRO underlined is the target. Also, if you plan to use the target sound again right next to the target sound, you have to check the box under it which says *Allow target sound in adjacent location*. The reason we are making the postvocalic R the target, is so that in the first 3 lists, all words begin with ER.

SATPAC List 4

Practice Phase SATPAC

	List #3			List #4	
1	ero	ɝɔ	ero	ɝɔ
2	ersho	ɝʃɔ	ooro	ʊˑɔ
3	ersh00	ɝʃu	oro	ɔˑɔ
4	erwe	ɝwɛ	aro	ɑˑɔ
5	eryi	ɝjɪ	airo	ɛˑɔ
6	ermae	ɝmeɪ	eero	ɪˑɔ
7	erchu	ɝtʃʌ	airo	ɛˑɔ
8	erdoe	ɝdoʊ	aro	ɑˑɔ
9	erthe	ɝθ ɛ	oro	ɔˑɔ
10	erpe	ɝpɛ	ooro	ʊˑɔ
11	erye	ɝjɛ	ero	ɝɔ
12	erve	ɝvɛ	ooro	ʊˑɔ
13	erje	ɝdʒɛ	oro	ɔˑɔ
14	ershoo	ɝʃʊ	aro	ɑˑɔ
15	erni	ɝnɪ	airo	ɛˑɔ
16	erfoe	ɝfoʊ	eero	ɪˑɔ
17	ery00	ɝju	airo	ɛˑɔ
18	erthoe	ɝθ oʊ	aro	ɑˑɔ
19	ermu	ɝmʌ	oro	ɔˑɔ
20	eryoo	ɝjʊ	ooro	ʊˑɔ

When we get to list 4, now the student is ready to use the various postvocalic /r/ sounds. It is explained to the student how every one of these different sounds are just different starting positions but they all end up in ER. So, for example, ARRO is just the A sound followed by ER. It is stressed that the position after the initial sound, will always end up in the lip-rounded position:

REMEDIATING OTHER SOUNDS

The L Sound

Lateral margins of tongue are not stabilized on the back molars but drop down and the tip is stabilized by pushing against the top front teeth.

Here you can see a little variation with the tongue on the left being closer to touching the back molars but still significantly different than the stabilized tongue in the picture below.

Common Problems:

Front teeth are missing

y/l (tongue is wide and stabilized on back molars for y (say “yeyo” (feel the placement) and contrast that with “yellow”). In yeyo, the tongue tip is not used.

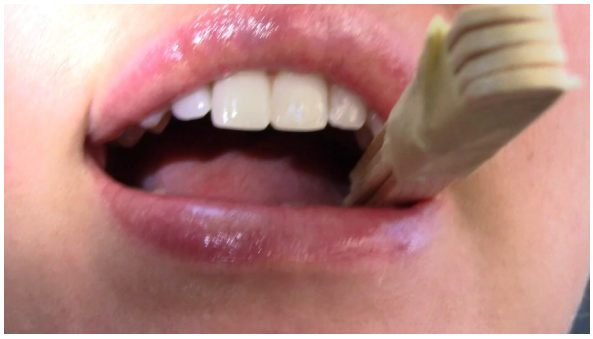
w/l (rounded lips-tongue tip not used at all)

Kids have difficulty with the quick push for /l/

Remediation Ideas

For y/l use the facilitating context ulu and stabilize the jaw halfway open (want to differentiate between jaw/ lips (stable) and the tongue tip which moves)

The UH, starts with the lateral margins of the tongue down and lax, away from the back molars. This helps to prevent the YUH sound. Use a mirror so student can watch the tongue tip.



Notice the contrast in tongue position with the L and Y sounds – Pay attention to the lateral margins of the tongue and their position in relation to the back molars

(tongue is wide and stabilized on back molars for Y (say “yeyo” (feel the placement) and contrast that with “yellow”)

This is yo in yeyo:

This is lo in yellow:

Facilitating Context EELEE for W/L

(The tongue is not used at all for the /l/ sound-just lips)

Practice pushing tongue tip against an infant tongue depressor (LEE) in this case we don't want lip rounding and are not worried about the lateral margins

EE gets the tongue and lips wide

Might need to hold the lips in a smile to prevent lip rounding and have them push the tongue depressor outside the mouth

Correct /l/ position:

Incorrect w/l position:

Other Remediation Ideas

Have the student focus on pushing the tongue tip quickly to make the sound (can push against a tongue depressor)

As an intermediate step, I often use interdental placement to get the /luh/ sound (bite down on tongue and open quickly with some lip rounding)and then transition to correct placement

The SH Sound

Basically the same position as the /s/ but the midline groove is wider. Tongue tip is usually lower and lateral margins of tongue are stabilized on the back molars. Lips are typically rounded and teeth are slightly open.

Common Problems:

Student says t/sh (stopping)

Student says s/sh

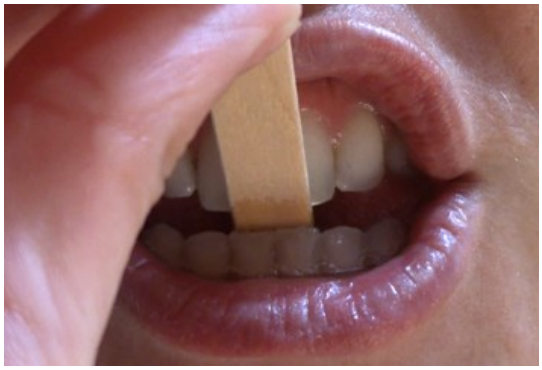
SH is lateralized (and /s/ isn't)

Remediation Ideas:

For t/sh, stopping, I usually work from the /s/ and then move the /s/ (tongue) back with an infant tongue depressor (EES)

For s/sh, push the tongue back with an infant tongue depressor and round the lips

For s/sh, push the tongue down with an infant tongue depressor and round the lips



For lateralization, have the student say /s/ and push the tongue back with an infant tongue depressor and slightly round the lips. The /s/ turns into SH without the lateralization. At that point, the metacognition part of therapy happens where you start discussing why the student is making a good SH sound (i.e., lateral margins of the tongue are on the back molars instead of the tongue being stabilized on the roof of the mouth).

The CH, J Sounds

Basically the same position as the SH but the tongue tip and blade are up in /t/ position . Lateral margins of tongue are stabilized on the back molars. Lips are typically rounded and teeth are slightly open. The fricative SH sound stops abruptly.

Common Problems:

Student says t/ch (deaffrication)

Student says sh/ch

CH is lateralized (and /s/ isn't)

Remediation Ideas:

For sh/ch, start with the tongue up in the /t/ position and do t-sh. If it comes out /ts/, push the tip back with an infant tongue depressor with lip rounding and an abrupt stop. You can try a word like ITSH or EETSH

For sh/ch, have the student use a judo chop gesture and OTCH

For lateralization, have the student say /ts/ and push the tongue back with an infant tongue depressor and slightly round the lips with an abrupt stop. Again, the metacognitve aspect is brought in.

The K,G Sounds

Dorsum lifts up and contacts the back of the hard palate/soft palate. Lateral margins of tongue are stabilized on the back molars.

Problems:

Student fronts t/k, d/g

Student cannot lift the dorsum up to make the /k,g/ sounds

Remediation Ideas:

For fronting, start with OK, stabilize the jaw with 3 or 4 infant tongue depressors. Sometimes placing a tongue depressor over the tongue tip helps. (Note how difficult it is to front when the mouth is stabilized open).

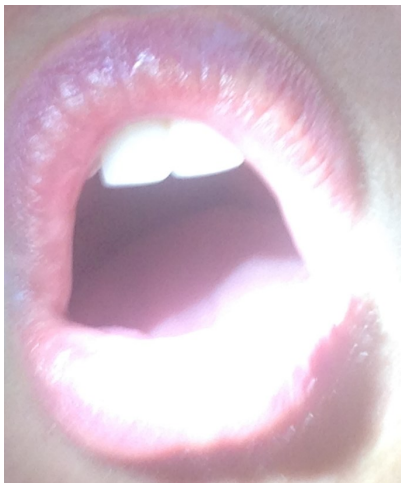
Remediation Ideas (cont.):

If the student cannot say the /k/ sound at all, try some oral-placement exercises:

1) sipping pudding through a straw for tongue retraction (straw is placed vertically, bent at the top and placed between the lips. If this is too difficult, the straw can be cut in half).

2)use a kazoo (tongue retracts, tip down and dorsum is up)

This image illustrates what it would look like if the student is blowing on a kazoo with the wide part placed vertically in the mouth. Note how the dorsum is up.



K and G Remediation and ASHA Special Interest Group 16

I have always had issues with /k,g/ remediation when the student cannot get the back tongue up and they basically say /h/ for /k/. So, I decided to throw it out there for my colleagues.

The results I got from SIG 16 were the following suggestions:

1. Gargling guttural sound, gargle with water.

2.Radio static fricative then shorten it.

3.Car crash noise

4.Cat hissing sound khhh w/mouth wide open

5.KR, GR sounds

6.Using a spoon inverted pushing the tip down and the back up

7.Anchoring the tip against the bottom teeth

8.Velcro while saying fricative K

Anyway, I went down the list with my student and ending up combining the inverted spoon with the GR sound and he got it! Let me know if any of these work for you. I would also suggest joining SIG 16 as I've found it to be helpful and informative!

The TH Sounds

Tongue tip is placed interdentally. There is no lateral margin stabilization against the back molars.

Common Problems:

Lingua alveolar placement (dis/this)

f/th (fink/think, baf/bath)

Remediation Ideas:

Using a visual model with a mirror, student sticks out the tongue for TH. Often the tongue is over-extended which should eventually be addressed.

Use the SATPAC word MOTHO or MOTHMO as it involves coarticulation transitioning from closed/open/ closed/open which is more difficult at first but leads to quicker transfer.

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Addendum 1:

SATPAC Sample IEP Goal and Objectives:

Goal: X will use the /s,z/ sounds with 80% accuracy in conversational speech (2/3 trials).

Objective: X will use the /s,z/ sounds in nonwords in speech therapy with 80% accuracy (2/3 trials).

Objective: X will use the /s,z/ sounds in phrases/sentences in speech therapy with 80% accuracy (2/3 trials).

Objective: X will use the /s,z/ sounds with 80% accuracy in conversational speech in speech therapy (2/3 trials).

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