

Implementing a Phonetically Consistent Approach to /r/ Remediation using The Entire World of R™



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How do you feel about /r/?



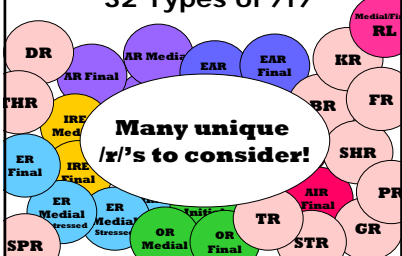
Does your current method of treatment and evaluation:

- Evaluate all variations of /r/ in all word positions?
- Establish/use natural tongue production?
- Remediate only the misproduced /r/ allophones to meet the students' individual needs?

Does your method of /r/ treatment:

- Focus heavily on [er] to exclusion of other phonemes?
- Utilize phonetically consistent probe lists for production training?
- Provide measurable progress?

32 Types of /r/



Many unique /r/'s to consider!



Objectives

You will:

- Identify the 6 /r/ controlled vowels.
- Know how to phonetically evaluate and treat the various word positions of the 6 /r/ controlled vowels.
- Be able to write measurable, objective IEP goals for the /r/ phonemes.
- Be able to differentiate between visual and non-visual /r/ controlled vowels.
- Be able to implement at least 3 articulation techniques to elicit the /r/ phoneme.
- Know the benefits of evaluating and treating /r/.

Facts About /r/

- Consonantal or Vowel-like
- Post-vocalic /r/ is influenced by vowel (*i.e. floor, car, tower*).
- One of the most frequently misproduced sounds.
- One of the later developing phonemes

The Changing Nature of /r/

Car /ar/ Four /or/

Anchor /er/ Butter /er/

Spelling is not a good guide

Why is /r/ different than other phonemes?

- No consistent placement as there is for other phonemes (e.g. /t/ or /s/)-Alveolar ridge.
- /r/ cannot be treated solely by word position, each of the 6 vocalic /r/ allophones are produced differently.

Categories of /r/

- Prevocalic, Initial, or Consonantal /r/
e.g. ring, run, race
- Initial /r/ Blends
e.g. price, break, straight
- Vocalic /r/ or R-controlled
e.g. door, star, skier
- Medial/final /r/
e.g. girl, swirl, barrel

[or] Initial	[or] Medial	[or] Final
Orville	Award	Snore
Ornament	Export	Adore
Organ	Fork	Core
Orient	Board	Floor
Oriole	Worn	Soar

Phonemic Approach

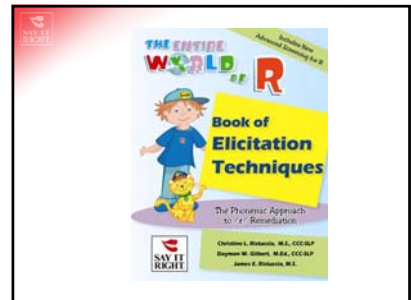
vs.

Initial	Medial	Final
Ribbon	Barefoot	Car
Run	Buttercup	Fear
Rain	Thorn	Four
Race	Wireless	Butter
Ring	Barn	Software

Traditional Approach

The Entire World of R Phonetic Approach

- Phonetically consistent probes for each vocalic /r/ allophone.
- Only 1 /r/ per word for "pure" practice.
- Organized by word position.
- Words are used as a tool for specific elicitation techniques.



Benefits of The Entire World of R Phonetic Approach

- Practice specific allophones that correlate to student's misproductions.
- Manner and production for the specific /r/ allophones are repetitively practiced
- Consistent ear training.
- Oral musculature and kinesthetic awareness.

Does a phonetically consistent /r/ approach work?

Phonetically Consistent Approach to /r/ Study

- Conducted in a naturalistic environment (elementary and middle school).
- Practicing SLP's collected the data and administered evaluation and treatment procedures.

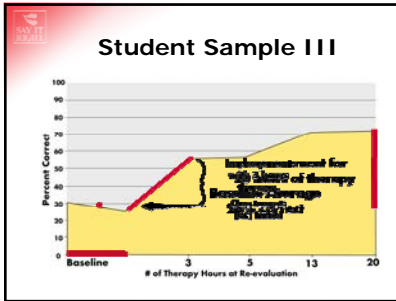
Example of Generalization

Student Name: C.C. Target: at level
SLP: NJA

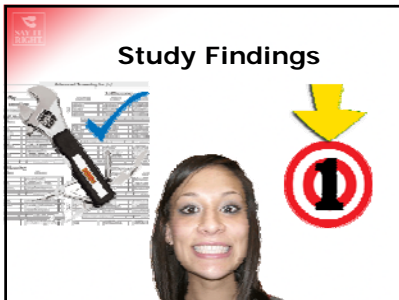
% correct

Baseline/Maintenance Screening Results

Screening	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Baseline Screening #1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Screening #1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Screening #2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



- ### Research Results
- Generalization occurred for 100% of students.
 - 58% ended with 3 or fewer errors, 7 dismissed.
 - 4 out of 5 students corrected 5 or more /r/ errors.



Study Findings

Demonstrated that the phonemic approach to /r/ could be replicated by school-based SLP's who only received a 2 hour training.

Study Conclusion

Validated the theory that evaluating and treating /r/ phonetically based on word position and sound class is an effective method.

- ### Review: Reasons for using a phonetically consistent approach
- Better understanding of the complex nature of /r/.
 - Measurable progress for students.
 - Decrease in caseload size!
 - **Evidence-supported** method which adds accountability for yourself, parents and school staff.

What does this mean to me?

I just want to treat /r/!

Where do I start?

- ### Start With a Comprehensive Evaluation
- Evaluate **ALL** vocalic /r/ allophones in **ALL** word positions to attain a comprehensive understanding of student's individual present level of performance.
 - Evaluate prevocalic /r/ (red) and all initial /r/ blends (e.g bread).

Why Evaluate All Different Types of /r/?

- To find a starting point for treatment research shows that *almost all students can produce at least 1 type of /r/*. (Curtis & Hardy, 1959; Ristuccia, 2005).
- Pinpoint exactly where to begin therapy according to your student's **individual** needs.

Jacob's Single Word Screening

Jacob's Screening Result

Jacob's Results

- Even though many /r/ productions are misproduced, Jacob does have allophones that are correctly produced.
- Ignore errors and focus on using his correctly produced productions to elicit chosen target.

For Easier Intervention Treatment

- Administer **entire** Advanced screening (all /r/ allophones).
- Differentiate correct and incorrect /r/ productions.
- Choose one target.

Case Study #1

- Matthew
- 10 year-old 5th grader
- Mispronounces his /r/'s
- You conduct Advanced screening....

Initial /r/ Blends		Initial /r/ Blends	
Stage	Blends	Stage	Blends
Stage 1	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 2	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 2	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 3	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 3	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 4	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 4	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 5	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 5	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 6	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 6	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 7	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 7	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 8	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 8	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 9	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 9	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 10	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 10	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 11	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 11	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 12	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 12	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 13	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 13	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 14	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 14	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 15	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 15	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 16	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 16	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 17	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 17	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 18	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 18	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 19	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 19	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 20	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 20	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 21	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 21	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 22	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 22	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 23	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 23	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 24	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 24	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 25	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 25	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 26	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 26	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 27	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 27	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 28	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 28	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 29	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 29	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 30	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 30	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 31	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 31	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 32	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 32	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 33	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 33	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 34	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 34	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 35	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 35	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 36	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 36	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 37	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 37	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 38	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 38	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 39	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 39	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 40	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 40	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 41	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 41	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 42	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 42	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 43	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 43	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 44	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 44	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 45	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 45	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 46	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 46	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 47	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 47	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 48	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 48	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 49	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr
Stage 49	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr	Stage 50	Tr, Pr, Br, Cr, Fr, Dr, Gr, Cr, Fr, Dr, Gr

Matthew Results

Blends	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%	0%	
Initial /r/ Blends	100	95	98	64	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

- Student uses retracted /r/.
- Successfully produces all initial /r/ blends.

Matthew Potential Target Options

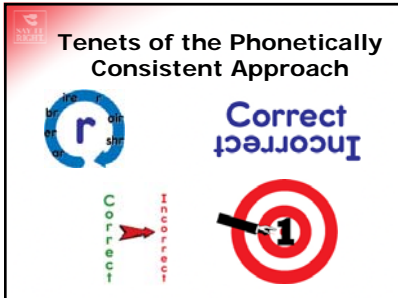
Blends	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%	0%	
Initial /r/ Blends	100	95	98	64	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Final /r/ Blends																						
Medial /r/ Blends																						
Final /r/ Blends																						

- [ar] Final 66%
- [or] Final 77%
- [ire] Medial 66%
- [ire] Final 66%

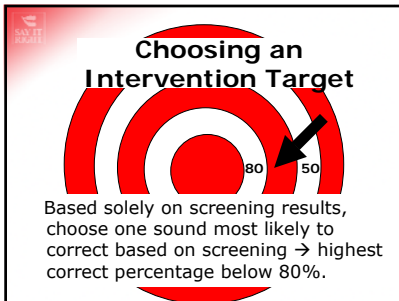
Matthew goals

IEP Goals Matthew will produce [ar], [ir], and [or] with 80% accuracy over 5 consecutive therapy sessions as measured by SLP tally and probe test.

Working File Goals Matthew will produce [ar] initial, medial, and final word positions with 80% accuracy over 5 consecutive sessions. [ar] final is the first target followed by [ar] initial. Matthew will open his mouth wider during [ar] productions.



- ### Plan Remediation
- Choose target based on screening results.
 - Apply elicitation techniques based on the specific word position of the target (will vary student to student).
 - Consistently focus on chosen target until mastery.
 - Use phonetically consistent probe lists for selected target.



- ### You don't have to remediate all allophones of /r/!!!!!!
- Target only the misproduced /r/ allophones!
 - Only a need to remediate all /r/ allophones if all were **chronically** misproduced and there was lack of generalization.

- ### Why focus on one sound and word position at a time?
- Provides consistent practice & repetition.
 - Enhances ear training/motor planning.
 - Ensures student/SLP knows goal.
 - Allows productions of other misproduced /r/ allophones not yet targeted in therapy to generalize.
 - Document student progress.

Treatment Goal Samples

Sample Goal:
Alex will produce [ar, or, ire, and ear] with 80% accuracy at the sentence level for 5 consecutive sessions.

Sample Working File Goal:
Alex will produce [ar] initial, medial & final word positions with 80% accuracy for 5 consecutive sessions. [ar] final will be the first target followed by [ar] initial.

Review: Evaluation and Target Selection

- Evaluate all variations of /r/.
- Interpret the evaluation results.
- Choose one intervention target by determining allophone with highest chance of improvement.
- Write goals and objectives.

Tips for Working with Students

- Multi-modality--involve many senses.
- Repetition--get as many practice words in as possible.
- Homework are words student can **produce perfectly** in therapy.
- Consistent, consistent, consistent.

Blocked vs. Random Practice (Motor learning theory, Skelton, 2004)

Traditional Blocked Practice	Random Practice
Isolation	Sentences
Single Words	Isolation
Phrases	Structured Conversation
Sentences	Single Words
Structured Conversation	Phrases
Spontaneous Conversation	Spontaneous Conversation
Maintenance	Single Words
	Maintenance

Visual Teaching Tools

Say Ahhh-RR!

Isolation

Isolation

/r/ Initial Single Words

Name: _____ Date: _____

Directions: Say each word slowly. Make sure to elongate the initial /r/ sound. Mark the mouth/face with an appropriate letter or pronunciation.

apple	giraffe
giraffe	giraffe
gray	grade
gray	gray

/r/ Initial Phrases

Name: _____ Date: _____

Directions: Say each phrase slowly. Make sure to elongate the initial /r/ sound. Mark the mouth/face with an appropriate letter or pronunciation.

A big eggplant.	_____
Susan's gym.	_____
Let them.	_____
Let her the cat.	_____
Empty books.	_____

Remediation of (Prevocalic /r/)

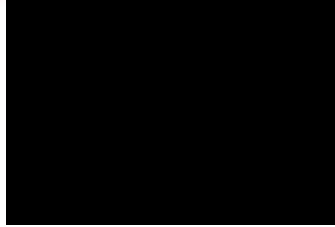
- Have student use a mirror so that she can see her own mouth. This is important to eliminate any lip rounding and ensure that the student is producing both the /r/ plus the vowel.

Use Prevocalic /r/ to Elicit ear

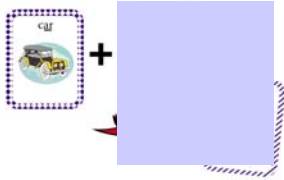
- A successfully produced prevocalic /r/ can be used to shape other /r/ variations.

Example: *ear red*
slowly fade out *red*.


Remediating Rebecca



Whisper Technique



Voiced vs. Voiceless Cognates



Great / Crate

How to Evaluate voiced vs. voiceless cognates?

Probe for vocalic/consonantal and consonantal/vocalic combinations for a target allophone. (Elicitation Probe).


orp/orb	por/bor
ort/ord	tor/dor
ors/orz	sor/zor

Determine Productions of /r/

- Instruct her to say one of the correctly produced /r/ words and ask what her tongue is doing.
- Use her productions to determine her natural production of /r/: *retroflexed* or *retracted*.




Hand Signals



Retroflexed **Retracted**

What /r/ do you make?



Retroflexed **Retracted**

What /r/ do you make?

Who makes a retroflexed /r/?


Who makes a retracted /r/?

Who does both?

Why Establish Natural Production?

- To know which verbal cues and hand signals to use as your starting point.
- To use what the student's tongue does **naturally** to increase kinesthetic awareness of tongue placement.

Evaluating with Dialectal Differences



When to move onto the next sound and/or word position?


- Once a word position for target /r/ is mastered (criterion is 80% for 5 consecutive sessions at sentence level).
- Re-administer advanced screening to choose next intervention target and assess **generalization**.

Always Review Previously Mastered Sounds

- At the beginning of each therapy session review and practice previously mastered allophones.
- Use sentence or reading level materials.

Ways to Encourage Self-Monitoring & Evaluation

- Remind student each session of his specific goal.
- Marbles in a jar.
- Students check-off correct responses on a data sheet.



Ideas for Getting Multiple Responses

- Use word lists or picture cards.
- Use a tally counter.
- Set a timer and reward for correct productions.
- Have a contest to encourage competition between two or more students or you and the student.

Working with Groups

- Attempt to schedule all /r/ students together.
- Treat each student/allophone separately. Each student will have own treatment plan tailored to their **specific** needs.

Age to Begin Treatment

- Developmental: at 7-8 years old.
- Normative Sequence: when muscles are matured and /r/ controlled vowels are taught in 2nd grade curriculum.
- Complexity Approach: Begin with later developing sounds to achieve generalization in early developing sounds (Morrisette, et al 1996).

Appropriate Homework

- Stage 1: Practicing natural tongue positioning (retroflex vs. retracted /r/) to gain kinesthetic awareness.
- Stage 2: Send home words that the student can consistently produce **perfectly** in therapy.

Homework: Good Practice Times

- In the morning before brushing teeth.
- Before or after homework.
- As soon as they get home from school or right before dinner.
- Before they go to bed at night.
- At the dinner table or use phone if working on transferring /r/ to conversation.
- Have family members help if needed.

Ways to Measure Student Progress:

- Briefly review previously mastered targets to check for retention.
- Use advanced screening tool to collect current data and evaluate direction of therapy.
- Use Daily Data Collection and Daily Tally Sheets to measure progress day to day.

Daily Data Collection

Student Name: _____ SLP Name: _____
 Age: _____ Date: _____
 Date of Birth: _____ Working Pts. Number: _____
 SLP Date: _____ Screening Date: _____

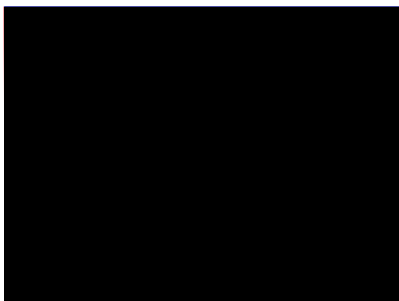
Daily Data Collection Sheet

Date	Target	Activities	Notes	Success/ Difficult Words

Reasons for Lack of Progress- Chronic /r/ students

- Traditional approach was taught with lack of target/wrong target.
- Student taught incorrectly (er red, er run etc.)
- Student not taught natural tongue positioning.

Speech has become **effortful**.



Lack of Success

- Re-administer the Advanced screening to check generalization and choose a **new** target.
- Review and practice /r/'s that the student can correctly produce.
- Administer Elicitation Probe for in-depth screening.

Dismissal Criteria

- When students can produce all /r/ allophones with at least 80% mastery at the sentence level.
- When students, parents, and teachers report it is no longer a problem.
- When articulation needs can be addressed at home or in the classroom.

Review: Intervention

- Treat only one target until mastered with criterion of 80% at sentence level over 5 consecutive sessions.
- Re-evaluate/note generalizations.
- Select new target and treat.
- Continue until all allophones are correctly produced.
- Review and reinforce.

Case Study #2

- Shelly is 7-year-old 2nd grader.
- Referred by resource teacher.
- Directions: Using results of screening to determine intervention target.

Shelly Screening Results

Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0

- Student uses retracted /r/.
- Successfully produces all initial /r/ blends.

Which target would you choose? Why?

Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0

↑ ↑ ↑ ↑

Potential Targets

Which are below 80% and above 50%

- [ear] medial - 55%
- [er] medial unstressed - 66%
- [ire] medial - 66%
- [air] medial - 66%

Shelly's Target Considerations using Elicitation Techniques

- Coarticulation within a sound family.
- ear final (0%) + ear initial (100%)
- air final (0%) + air initial (100%)
- or final (0%) + or initial (88%)

Which target do you choose and why?

Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person A	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0
Person B	100	33	33	0	100	55	22	100	66	66	33	33	0	66	0	88	22	0	0

Intervention Target = Depends on success using the elicitation techniques

Case Study # 3

- Billy is 11 years old.
- Referred by his teacher because he can't say /r/.
- He loves race cars and trucks, but kids make fun of his speech when he's playing.

Working File Goal

Student will produce [ar] in the initial position with the following phonemes found on the elicitation probe f/v, s/z, sh/j, k/g, and m/n, with 80% accuracy in single words phrases and sentences.

Suggested Treatment

- Voiced exercises- use correct voiced cognates to elicit misproduced words.
 - Use contrast words:
 - arza* and *arsenic*
 - argue* and *ark*
- Practice [ar] initial words until 80% accuracy at the sentence level is achieved.
- Re-screen. Pick new target.

Questions?

Handout

www.sayitright.org/resources

References

[The following text is extremely small and illegible, appearing to be a list of references.]