



Got /r/ Problems?

A Phonemic Approach to /r/ Remediation™



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Discussion

The lack of a comprehensive remediation strategy is rooted in a general misunderstanding of the /r/ phoneme, deficiencies in post-graduate education instruction, deficient remediation materials and most notably no generally accepted *effective* method for tackling core /r/ phoneme misarticulation.

Facts About /r/

- /r/ is a glide because of its extreme flexibility in assuming the role of either a consonant or a vowel.
- /r/ has vowel-like characteristics especially if the preceding sound is a vowel.
- /r/ controlled vowels (e.g. /or/, /ar/) are really comprised of 2 sounds (the vowel + the /r/).

The Changing Nature of /r/

The phoneme /r/ in the word "CAR" (/ar/ final) is pronounced differently from the word "FOR" (/or/ final) or the word "BUTTER" (/er/ final).

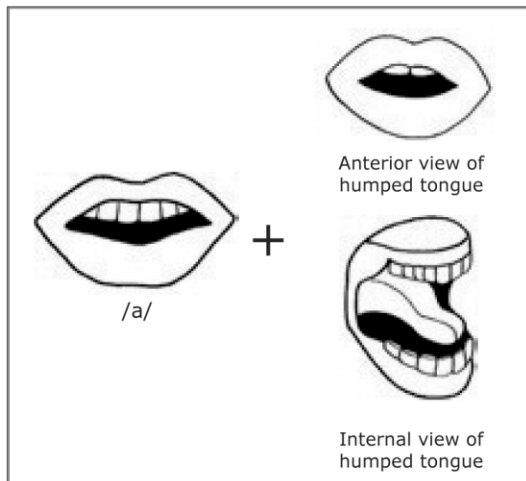


Figure 1-1 /a/ mouth position,
as in CAR

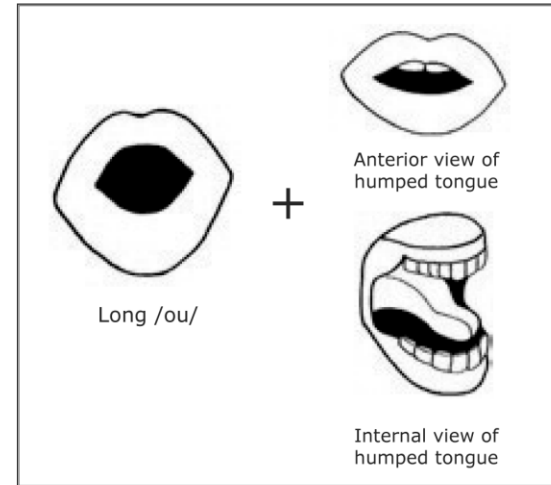


Figure 1-2 /or/ mouth position,
as in FOR

However, the final /r/ phoneme in the word "ANCHOR" is pronounced the same as the /r/ phoneme in the word "BUTTER. This is because they are both phonetically /er/ final words despite the spelling differences.

8 Variations of /r/

<p><u>/er/</u></p> <p>Ernie Buttercup Feather</p>	<p><u>/or/</u></p> <p>Orville Corn Four</p>	<p><u>/ar/</u></p> <p>Archie Farm Star</p>
<p><u>/air/</u></p> <p>Erin Ferry Fair</p>	<p><u>/ire/</u></p> <p>Ireland Fire Fireman</p>	<p><u>/ear/</u></p> <p>Erie Cereal Deer</p>
<p><u>/rl/</u></p> <p>Meryl</p>	<p><u>Prevocalic /r/</u></p> <p>Rosa</p>	



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21 Types of /r/

/air/ Initial

/air/ Medial

/air/ Final

/ar/ Initial

/ar/ Medial

/ar/ Final

/or/ Initial

/or/ Medial

/or/ Final

/ear/ Initial

/ear/ Medial

/ear/ Final

/ire/ Initial

/ire/ Medial

/ire/ Final

/er/ Initial

**/er/ Medial
Stressed**

/er/ Final

Prevocalic /r/

**/er/ Medial
Unstressed**

**/rl/ Medial &
Final**

8 Variations of /r/

x

3 word positions (initial, medial & final)

- Limited /rl/ and Prevocalic /r/ words

+ stressed medial /er/

21 Types of /r/

Why Evaluate the 21 Variations of /r/?

- To find a starting point for treatment (some students can say more than you think they can).
- To find out where you will begin your treatment (e.g. visual vowels or using a successful point of production).
- To properly diagnose the problem (i.e. Are they just distorting the vowels or can they say some word positions, but not others?).

Sample Evaluation of /r/

- Case Study: Erin Blair, an 8 yr old, is frustrated because she can't correctly pronounce her name. Also, the classroom teacher is concerned with her spelling and reading of various /r/ words.
- Comprehensive evaluation of /r/ shows that the student misarticulated initial and final /air/ words.
- Therefore, initial and final /air/ words should be the only words targeted in the remediation process.



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<u>/air/ Initial</u>	<u>/air/ Medial</u>	<u>/air/ Final</u>
Arizona	Dairy	Millionaire
Erin	Ceremony	Square
Heiress	Haircut	Scare
Arrowhead	Barefoot	Tear
Aerosol	Stairs	Pair

**Phonetic
Approach**

VS.

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

**Traditional
Approach**

Concern With Remediating /r/ Only Based on Initial, Medial and Final Word Positions

- This approach only focuses on the spelling of the word and the position of where /r/ is in a word.
- The phonetic component of /r/ is completely ignored.
- Many of the /r/ controlled vowels are not represented in this list.
- No starting point for therapy.

Solution

- Evaluate and treat /r/ phonetically based on word position and sound.
- Clients may be able to produce an /r/ controlled vowel in one word position, but not another.

Benefits of Using a Phonetic Approach To Remediate /r/

- Addresses true characteristics of the /r/ controlled vowels.
- Helps write targeted IEP goals.
- Consistent practice for the students.
- Saves time.
- Get results.
- Other Misarticulated /r/'s begin to generalize.

Remediation

- Work on only one type of /r/ at a time. (e.g. /ar/ initial) while slowly introducing other word positions within that variation (e.g. /ar/ final).
- Target and complete one /r/ controlled vowel combination (e.g. /ar/) before moving onto another /r/ controlled vowel combination (e.g. /or/).
- Use success in one word position to shape the other word positions (e.g. if they are successful with /ar/ medial words, use their success in that position to shape the other /ar/ word positions).

Why Focus on One Sound and Word Position at a Time?

- Enhances motor planning.
- Consistent practice for the student.
- Student knows their goal (s).
- **Goal:** Achieving mastery at that level. You can use their success at that level to shape other /r/ sounds/word positions.

Visual & Non-Visual /r/ Controlled Vowels

- Varies student to student.
- This theory is based on the fact that babies learn visual phonemes first. (e.g. /p/, /b/, /m/)

Visual Vowels

/ar/

Prevocalic /r/

/or/

/ire/

/ear/

/air/

Non-Visual Vowels

/er/

/rl/

Elicitation Techniques

- Write target /r/ controlled vowel on board to increase students awareness that there are two or more sounds they need to produce.
- Model target sound for student.
- Target one entire position before moving onto the next word position.

Elicitation Techniques

- Have students use a mirror so that they can see their own mouth. This is important to eliminate any lip rounding and to ensure that the student is producing both the /r/ plus the vowel.
- Remediate only the /r/ controlled vowel and word position in need.
- Consistently practice the /r/ controlled vowel and word position in need.

Elicitation Techniques

- Use their success in one word position to help shape the other misarticulated word positions.
- Elongate the /r/ controlled vowel (e.g. /ar/) to ensure that both the vowel plus the /r/ are being pronounced (2-3 seconds).
- Prompt with placement/manner cues, visual teaching tools.

Shaping an /r/ From a Word Position That They Can Say

- Educate the student about the /r/ variations that they can say (show them their screening results).
- Instruct them to say one of the /r/ words that they can say and ask them what their tongue is doing.
- Use the whisper technique. E.g. Student can say *Archie* and *barn*, but not *star*. Instruct student to say the word *bar*> and whisper the final /n/.
- Put the glottal /h/ sound preceding and following the /r/ sound (e.g. her hat).

Benefits of Using /r/'s That the Student Can Say

- Mental/kinesthetic practice facilitates learning.
- Demonstrates to the student that he/she can say /r/.
- Increases motivation

Evaluation Tips

1. Evaluate the 21 types of /r/ + initial /r/ blends.
2. Did the student produce any correct /r/ variation or word position?
3. If the student did produce correct /r/ variation/word positions; determine which ones they were.
4. Could the student produce any of the /er/ variations?

Evaluation Tips

5. Could the student produce initial /r/ blends?
6. Were most of the correct sounds the visual vowels (/ar/, /or/, /ire/, /ear/, /air/)?
7. Do some probe testing the first couple of sessions to determine from the correct productions which /r/ productions the student was the most successful with?

Evaluation Tips

8. If the student has no correct productions of the 21 variations of /r/, begin with the visual vowels (use the suggested hierarchy) and elicitation techniques.
9. If the student has no correct production of the 21 variations of /r/ and have correct productions of /r/ blends, try using some of the /r/ blends to facilitate /er/. For example:
Brett rett, B > ertt
10. Is lip rounding evident?

Evaluation Tips




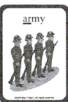

















11. Is the student deleting or making the vowel in the /r/ controlled vowel combination too short?
12. Are the students over exaggerating the /r/? Does the student sound/look as though he is trying too hard. E.g. putting an /er/ in front of prevocalic /r/'s as in /er red/.
13. Has the student had prior speech therapy for /r/? How long, what approach was used?

Erin Blair Evaluation

Student Name Erin Blair
 Screening Date 5-1-02 Date of Birth 2-20-93
 Examiner C. Ristuccia



The Entire
World of R™
Screening Form

1. /air/ Initial — 	2. /air/ Medial + 	3. /air/ Final — 
4. /ar/ Initial + 	5. /ar/ Medial + 	6. /ar/ Final + 
7. /ear/ Initial + 	8. /ear/ Medial + 	9. /ear/ Final + 
10. /ire/ Initial + 	11. /ire/ Medial + 	12. /ire/ Final + 
13. /or/ Initial + 	14. /or/ Medial + 	15. /or/ Final + 
16. /er/ Initial + 	17. /er/ Medial Stressed + 	18. /er/ Medial Unstressed + 
19. /er/ Final + 	20. /r/ + 	21. Prevocalic /r/ + 

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Erin Blair, an 8 year old, 3rd grader, is frustrated because she can't correctly pronounce her name. She also had difficulty with certain /r/ words. Her classroom teacher is concerned with her spelling and reading as Erin is not able to make sound/symbol association with words containing /r/, so she referred Erin to speech. A comprehensive screening evaluation of /r/ for Erin shows that the student misarticulates initial and final /air/ words.

Erin Blair Evaluation

- Based on *The Entire World of R*™ screening evaluation, only initial and final /air/ words should be targeted in the remediation process.
- **Sample Word List:**

/air/ Initial

Arizona

Erin

Heiress

Arrowhead

Aerosol

/air/ Final

Millionaire

Square

Scare

Tear

Pair

Use Successfully Produced /r/'s to Produce Other /r/'s

- Example:
Correctly produced /ar/
final
- *Car* > *art* (elicit initial /ar/) cart (elicit medial /ar/)
- Example:
Correctly produced /air/
final
- *Fair* > *air* (elicit initial /air/)

Facts About /er/

- /er/ is part of the other /r/ controlled vowels
- 2 ways to teach the /er/ sound

Retroflexed or Retracted






















Either way is fine.

Mary Miller Case Study

Student Name Mary Miller
 Screening Date 10-11-02 Date of Birth 4-17-95
 Examiner C. Ristuccia



The Entire
World of R™
Screening Form

1. /air/ Initial +		2. /air/ Medial +		3. /air/ Final +	
4. /ar/ Initial -		5. /ar/ Medial -		6. /ar/ Final -	
7. /ear/ Initial +		8. /ear/ Medial +		9. /ear/ Final +	
10. /ire/ Initial +		11. /ire/ Medial +		12. /ire/ Final +	
13. /or/ Initial -		14. /or/ Medial -		15. /or/ Final -	
16. /er/ Initial +		17. /er/ Medial Stressed -		18. /er/ Medial Unstressed +	
19. /er/ Final -		20. /r/ +		21. Prevocalic /r/ +	

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Mary Miller is a 7-year-old second grader. She recently transferred with a current speech IEP. When listening to Mary speak, she obviously has trouble articulating her /r/'s. Her file indicates that her previous speech-language pathologist had limited progress with /r/ therapy. You do a more detailed screening utilizing **The Entire World of R™** screening form. The result is to the left.

Mary Miller Case Study

- Based on ***The Entire World of R™*** screening evaluation, only initial, medial and final /ar/ words, initial, medial and final /or/ and /er/ medial stressed and /er/ final words should be targeted in the remediation process.
- **Remediation Plan:**
Begin remediating the visual vowels first such as initial, medial and final /ar/. Next target initial, medial and final /or/. Save /er/ medial stressed and /er/ final for last.

What are some sample word lists for Mary to use?

Retroflex vs. Retracted

- You can use either approach. If student is unsuccessful with retroflex /r/ even after you have tried various techniques, then you may want to introduce the retracted /r/.

Techniques to Elicit /er/

- Alternate with: her hat, hat her; /er/, /ar/, /ar/, /er/.
- Listen to which /er/ word position they are more successful with (e.g. /er/ medial stressed). Practice these, alternate with drills if you need to.
- Note: Some words within /er/ medial stressed may be easier to produce due to co-articulation (e.g. hurdle vs. purse).
- If the can successfully produce initial /r/ blends, you can try to elongate the blends.

When to Move onto the Next Sound and/or Word Position?

- Once a word position for that phonetic /r/ is mastered (e.g. Target /ar/ initial until mastery--80% at the phrase and sentence level--then medial /ar/, then final /ar/).
- Only after all three word positions are mastered (initial, medial, & final) should the student move on to another vowel combination (e.g. /or/).

Eric Ross Case Study

Student Name Eric Ross
 Screening Date 5-17-02 Date of Birth 10-30-94
 Examiner C. Ristuccia



The Entire
World of R™
Screening Form

1. /air/ Initial —	2. /air/ Medial +	3. /air/ Final —
4. /ar/ Initial +	5. /ar/ Medial +	6. /ar/ Final +
7. /ear/ Initial +	8. /ear/ Medial +	9. /ear/ Final +
10. /ire/ Initial +	11. /ire/ Medial +	12. /ire/ Final +
13. /or/ Initial +	14. /or/ Medial +	15. /or/ Final +
16. /er/ Initial —	17. /er/ Medial Strressed +	18. /er/ Medial Unstressed +
19. /er/ Final +	20. /r/ Initial +	21. Prevocalic /r/ —

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You get an initial referral for a 3rd grade student named Eric Ross. The teacher and the parent are concerned with the articulation of /r/, which they feel, is affecting his reading and spelling.

A comprehensive screening was done utilizing ***The Entire World of R™ Screening Form.***

Eric Ross Case Study

- Eric misarticulates initial and final /air/, prevocalic /r/ and /er/ in the initial word position.
- Treatment Plan:
Begin remediating the visual vowels first such as initial and final /air/ and prevocalic /r/. Save /er/ for last.

What are some sample words to use with Eric?

Summary

- Current strategies are ineffective.
- 8 /r/ controlled vowels.
- Evaluated /r/ controlled vowels utilizing ***The Entire World of R™*** Screening Form.
- Remediation.
- Benefits of a phonetic approach to /r/ remediation.
- Elicitation techniques.