

## ■ OVERVIEW OF STEP UP TO R

The *Step Up to R* program is a series of step-by-step lessons you or your therapy assistant can use to remediate /r/ production in elementary and middle school-aged children. Lessons span from elicitation to generalization. Targets include /r/ in all word positions and vowel contexts and move from syllables to single words; phrases; sentences; paragraphs; and, ultimately, spontaneous conversation.

There are 12 chapters in this program:

- |                                  |                           |
|----------------------------------|---------------------------|
| 1. Assessments & Scoring Tools   | 7. “are”                  |
| 2. Getting Ready for /r/ Therapy | 8. “air”                  |
| 3. Initial /r/                   | 9. “ear”                  |
| 4. /r/ Blends                    | 10. “ire”                 |
| 5. “er”                          | 11. Generalization        |
| 6. “or”                          | 12. Carryover (on CD-ROM) |

Chapter 1: Assessments & Scoring Tools includes four assessments (see page 9) that are criterion referenced and, as such, do not include normative data or provide information to rank the student against any other student. Their purpose is to determine if a student demonstrates the ability to use all /r/ variations relevant to remediation in English. These assessments, combined with information from the Interpretation Chart on page 18, are tools you will use to determine the student’s optimal starting point in the program for efficient and effective therapy, for periodic monitoring of the student’s progress, as posttests to determine whether the student is still having trouble with a specific /r/ variation, and to document progress and aid in clinical decision-making. The scoring tools for this chapter are on the enclosed CD-ROM.

Chapter 2: Getting Ready for /r/ Therapy explains how to use the program and contains a Troubleshooting section that answers

questions about advancement through the program, motivation, and improvement of /r/ quality.

Chapters 3 through 10 contain lessons that target a specific /r/ variation. Each of these chapters begins with an auditory discrimination exercise and/or lessons to establish the target /r/ variation. Subsequent lessons in the chapter target the /r/ variation at the word, phrase, and sentence levels, with decreasing levels of support. These lessons are designed for students who reach less than 80% correct production in sentences without a model.

The Generalization chapter provides reading passages loaded with all the /r/ variations and lessons for structured conversation. Both types of activities will help you identify patterns of errors that may indicate the student needs further practice on a specific /r/ variation.

The Carryover chapter (on the CD-ROM) contains homework sheets the student will complete as he progresses through each chapter.

## ■ EVIDENCE-BASED PRACTICE

*Step Up to R* is a systematic program for /r/ remediation based on the best available scientific evidence and practical clinical experience.

### ■ Properties and Characteristics of /r/

Several characteristics of /r/ distinguish it from other phonemes and impact successful remediation. First, there is considerable variation in the articulatory gestures used to produce /r/, both among individuals and across phonetic contexts (Zawadzki & Kuehn, 1980). Although /r/ production can be generally classified as “bunched” or “retroflex,” adult English speakers use a variety of tongue positions and movements to produce /r/, and they

vary their production strategy based on articulatory context, particularly for surrounding vowels (Hoffman, Schuckers, & Ratusnik, 1977). This means a speaker often uses a different set of articulator movements to say /r/ as in *run* versus /ar/ as in *arcade*. Also, the /r/ sound is not a true vowel or consonant sound. /R/ is usually considered to be a consonant in the prevocalic position (e.g., *robe, race, ribbon*) because it is produced by concrete placement of the articulators. When /r/ is in the post-vocalic position (e.g., *car, bear, four*), it can be considered a glide (Peña-Brooks & Hegde, 2000). Glides are produced by changing the shape and position of articulators gradually, making them analogous to a time step in tap dancing that coordinates a sequence of movements. Given this intrinsic complexity, it is no wonder that /r/ is a later-developing sound that can be particularly challenging to remediate (Porter & Hodson, 2001).

## ■ Treatment Approach

*Step Up to R* is a highly-structured program, and review of the current best evidence suggests that a programmed approach may be more effective in achieving treatment results for /r/ than other forms of treatment (Ehren, 2010). This aligns with the conclusion reached by Herbert Galloway and C. Milton Blue (1975) who found that trained paraprofessionals were able to correct 83.5% of sound errors, with the /r/ sound accounting for 50% of the failures. Galloway and Blue concluded that a structured remediation program for /r/ might improve that outcome.

Because /r/ is such a complex target, it needs a combined approach to remediation. Since *Step Up to R* is a practical remediation tool and not a clinical research instrument, it is not limited to one approach. It includes the best features from a variety of proven treatment approaches, including the

Modified Cycles Approach (Hodson & Paden, 1991), the Sensory Motor Approach (McDonald, 1964), and Motor Learning Theory (Skelton, 2004).

Evidence that integration of the Sensory Motor Approach, which includes integral stimulation, and the Modified Cycles Approach is effective in remediating speech errors is emerging (Berman, Bauman-Waengler, & Garcia, 2007). Of the two, *Step Up to R* is most closely aligned to the Modified Cycles Approach (Hodson & Paden, 1991) which has the strongest research base for effectiveness in remediating articulation errors (Baker & McLeod, 2008). In the Cycles Approach, the clinician works with a student on a specific phonological process for a set period of time (i.e., a cycle), and then moves on to the next process that needs remediating. *Step Up to R* uses this principle in that it targets each /r/ variation for a short time and then moves on to the next /r/ variation. Acquisition of one /r/ variation strengthens the production of other variations. Presenting the next variation maintains momentum and encourages efficient movement toward overall correct /r/ production. One difference between a pure, Modified Cycles Approach and *Step Up to R* is that *Step Up to R* has a set “pass” criterion for each lesson. However, if a student does not meet the criterion within two sessions, he will move laterally within the framework of the book to the next most stimutable /r/ chapter, which is in alignment with the guiding principles of the Cycles Approach.

Elements of the Sensory Motor Approach are relevant to the treatment of /r/, given the motoric complexity inherent to producing this sound. The Sensory Motor Approach progresses as follows with the level of support fading as the complexity of the task increases:

syllables → facilitating contexts → motorically simple words → words with greater complexity → phrases → sentences → conversation

*Step Up to R* follows this pattern of target presentation within each step of each lesson and throughout the program as a whole.

## ■ Treatment Targets

As discussed earlier, /r/ is a moving target. It is both a consonant and a glide and is affected by the phonemic context in which it is produced (Hoffman, Schuckers, & Ratusnik, 1977). Variations, or allophones, of /r/ have been described and classified in relation to speech performance and remediation for many years (Shriberg, 1980; Hoffman, Schuckers, & Daniloff, 1980; Curtis & Hardy, 1959; Ehren, 2010; Ristuccia, Gilbert, & Ristuccia, 2006). *Step Up to R* utilizes a phonetic approach to target selection where the student works on one /r/ variation per session.

Generalization, or use of a correct /r/ in everyday conversation is, of course, the ultimate goal of treatment. *Step Up to R* uses high frequency and high density words such as *for* and *their* in reading tasks and spontaneous speech tasks throughout the program. Use of such words is linked to effective generalization for individual students (Morrisette & Gierut, 2002). Some other strategies linked to increased generalization are parental monitoring and reinforcement away from the treatment location (Shelton, Johnson, & Arndt, 1972; Wing & Heimgartner, 1973), emphasis on mental planning and self-evaluation skills (Ruscello & Shelton, 1979), and focus on self-monitoring (McReynolds, 1987). Research findings are mixed in that no one generalization strategy appears to be the best way to encourage generalization for every student. All we really know from the research is that strategies for generalization can help, and what works for one student may

not work for another. Therefore, I have used a mix of all these strategies in the Generalization chapter and have integrated them in all the teaching chapters of the book.

Practicing professionals who work to correct /r/ have editorialized on the importance of motivation for successful /r/ remediation (Deer, 2011). One of the aspects that sets *Step Up to R* apart from other programs is that it is designed to motivate students to become proficient at the largely motor-based skill of correct /r/ production by utilizing strategies rooted in metacognitive theory. The social cognitive perspective on self-regulated learning includes the premise that learners who are active agents in their own learning and who participate in monitoring and evaluating their own progress learn at a better rate and acquire more skills than students who do not (Bandura, 1976). Research on learning motor tasks has found that self-monitoring promotes self-efficacy (recognition by the learner that he is capable of attaining performance), which can facilitate future learning (Kitsantas & Zimmerman, 1998). For these reasons, *Step Up to R* contains a Progress Chart the student uses to self-monitor progress.

## ■ CONCLUSION

*Step Up to R* is a therapy program based on research and best practices that will allow you to effectively remediate /r/ from the first session to the last. The overall goal of *Step Up to R* is to allow you to teach correct /r/ production in a systematic way that increases overall success while reducing planning time and wasted therapy time. I hope it will meet all your /r/ therapy needs.

Best of luck in the successful remediation of /r/ production!

Leslie